SOUTHERN RHODESIA.

REPORT

ON

The Public Health

FOR THE YEAR 1921.

Seamen's Hospital Society
TROPICAL
DISEASES
2 - JAN. 1923
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Presented to the Legislative Council,
1922.

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CONTENTS.

PART I.

PAGE

Vital Statistics 1

Population, Births, Deaths

Health of Natives on Mines 2

Infectious, Communicable or Preventable Diseases 5

Smallpox, Typhoid Fever, Malta Fever, Malaria, Blackwater Fever, Epidemic Influenza, Encephalitis Lethargica, Bilharziasis, Infectious and Contagious Diseases of Childhood

Government Medical Officers 8

Salisbury, Bulawayo, Gwelo, Victoria, Lomagundi, Shamva, Filabusi, Rusape, Inyati, Melsetter, Arcturus, Inyanga, Marandellas, Bindura, Bulalima-Mangwe, Charter, Que Que, Mazoe, Gwanda, Ndanga

Public Health Laboratory and Research 20

Hospitals and Asylums 21

Administrative 23

PART II.

Report on Pasteur Institute and Public Health Laboratory 24

Report on Ingutsheni Mental Hospital 29

Tabular Appendix 32

SOUTHERN RHODESIA.

Report on the Public Health for the Year 1921.

Presented to the Legislative Council,
1922.

PART I.

Vital Statistics.

Population.—The result of the recent Census of the population, which was taken in May, 1921, came no doubt as a surprise to most people, and though I have repeatedly drawn attention during the recent intercensal years to the fact that the means at our disposal for the correct estimation of the population were open to a wide margin of error, still I did not anticipate such a difference in our figures as calculated and those returned in the 1921 Census, which show a decrease over our estimated figures of over 7,000 persons.

In the intercensal years of the last decennial period it has been the custom to calculate the population on the natural increase, or the excess of births over deaths, plus the increase of population by immigration, as shown by the railway returns of persons entering and leaving the country by rail, no notice being taken of entrants by road, whose numbers are negligible. The error in calculation has been traced to faulty compilation of the railway returns, but in what particular direction has not yet been elucidated.

The year 1921 being a Census year, no calculations are necessary to arrive at an estimated population, and we now so to speak start with a clean slate, and from the facts now before us and with two complete sets of Census figures to work upon, the growth of the population can now be calculated in intercensal years in terms of geometrical progression, this now being the practice generally adopted, though even this method of calculation is liable to error where any sudden change in the immigration or emigration figures takes place.

The Director of Census has returned the European population in May, 1921, as 33,620, being 7,181 less than the estimated population according to our returns.

In his report the Director has dealt fully with the relative number of persons of each sex in the various periods of life during the decennial period under review, which figures will be of the utmost value in future.

Birth Rate.—There were 913 European births registered in Southern Rhodesia in 1921, of which 468 were males and 445 females. This gives a crude birth rate of 27.13 per thousand on the estimated population.

There were eight plural births—all twins—ten illegitimate and twenty-seven still births.

Owing, however, to disparity in sex distribution in new countries, it is more correct to calculate the birth rate per thousand of the married women of the child-bearing age, though for obvious reasons this can only be done in a Census year. Calculated on this basis, the birth rate arrived at—between the ages of 15-45 years, the married females of child-bearing age—is 192.8 per thousand.

In Table No. 1 in the appendix giving the parental nationality during the past eight years, which is of interest, it will be seen that the percentage of children born of purely British parents has increased, whilst that of children born of Dutch parents on both sides has correspondingly decreased.

Death Rate.—There were 320 European deaths registered during the year 1921, giving a crude mortality rate on the estimated population of 9.52 per thousand.

The proportion of young adult males, amongst whom the death rate is always lowest, is, however, higher than in older colonies, and this is only to be expected. Hence the mere fact of a low death rate such as the above is insufficient evidence of the true mortality rate, unless it is corrected to what would be the death rate were the age and sex distribution of the population the same as that of England and Wales.

If the population is standardised on this basis, we find that the corrected death rate arrived at during the year 1921 was 11.82 per thousand. This is low even for a corrected death rate, and is one of the many indications that the country is now beginning to approximate to the settled conditions of older communities.

A classification showing all causes of deaths in the Territory for the period under review, with age periods, also the deaths classified as affecting Europeans and natives separately, will be found in Tables Nos. 3, 4, 5 and 6 in the appendix.

Health of Natives on Mines.

The reports of the Compound Inspectors of mines indicate that the conditions under which natives labour on the mines continue satisfactorily. With the exception of an epidemic of influenza which occurred in the winter of 1921, and affected natives and Europeans alike, there is little calling for special comment.

The average number of natives employed was approximately the same as in the previous year, being 37,605, as against 37,669 in 1920. The death rate from disease was 18.32 per thousand, being higher than in 1920. This, however, can be ascribed to the influenza epidemic, for if we deduct the 113 deaths from this cause, the death rate from all other diseases was only 15.32 per thousand, as compared with a death rate from disease of 15.90 per thousand in 1920.

The mortality rate amongst native mine labourers in Southern Rhodesia thus approximates more nearly to the mortality rate amongst similar classes of labour on the Rand, the following being the mortality rates amongst native miners on the Rand from 1917-1920 :—

1917.	1918.	1919.	1920.
11.00	21.40	14.21	16.01 per thousand.

The pneumonia incidence continues high amongst Rhodesian native miners as compared with the Rand, the death rate from this disease in 1921 being 6.73 per thousand employed, as compared with 2.19 per thousand on the Rand.

It is possible that the more systematic inoculation of all natives on the Rand with Lister's 8-strain vaccine may explain some of this difference, but other factors are probably at work, such as area and latitude from which native labour is recruited, and the proportion of long-service miners in regular employment.

The following return shows the number of cases of sickness, number of deaths, death rate per cent., sickness incidence rate per mille per annum, and death rate per mille per annum amongst natives employed on mines for the year 1921 :—

SOUTHERN RHODESIA (Number employed, 37,605).

Name of disease.	Total sick.	Deaths.	Case mortality per cent.	Sickness incidence rate per mille per annum employed.	Death rate per mille per annum employed.
Malaria	2,822	56	1.98	75.04	1.49
Scurvy	435	9	2.07	11.57 1.12	0.24
Syphilis	440	8	1.82	11.70	0.21
Pneumonia	1,090	253	23.21	28.99	6.73
Phthisis	130	39	30.00	3.42	1.04
Other diseases of chest ...	2,255	32	1.42	60.00	0.85
Dysentery	116	17	14.65	3.08	0.45
Diarrhœa	376	5	1.33	9.99	0.13
Other intestinal diseases	99	26	26.26	2.63	0.69
Debility	426	12	2.82	11.33	0.32
Influenza	2,030	113	5.57	53.98	3.00
Other diseases ...	4,632	119	2.57	123.17	3.16
Minor ailments ...	5,139	...	...	136.66	...
Accidents	456	94	20.61	12.13	2.50
Minor injuries ...	7,198	...	...	191.41	...
Totals ...	27,644	783	2.83	735.12	20.82

The following table gives the mortality and causes of death amongst the various groups of natives employed on mines during 1921 :—

MORTALITY AMONGST NATIVE MINE LABOURERS IN SOUTHERN RHODESIA FOR THE YEAR 1921.

CAUSES OF DEATH.

Territorial classification.	Malaria.	Scurvy.	Syphilis.	Pneumonia.	Phthisis.	Other diseases of chest.	Dysentery.	Diarrhœa.	Other intestinal diseases.	Debility.	Influenza.	Other diseases.	Accidents.	Totals.
Southern Rhodesia	3	...	2	18	1	5	...	...	2	1	13	16	16	77
Portuguese East Africa ...	2	...	3	25	9	3	3	...	1	3	7	12	8	76
Northern Rhodesia	29	5	1	82	12	14	7	3	8	3	47	44	18	273
Nyasaland	21	4	2	124	17	10	6	2	15	5	44	46	51	347
Other Sources	1	...	...	4	...	...	1	...	...	...	2	1	1	10
Totals	56	9	8	253	39	32	17	5	26	12	113	119	94	783

The following table, showing the number of properties employing various numbers of boys, is inserted to give some idea of the size of the mining properties in this Territory :—

3	properties	employing	2,000	and over.
1	property	,,	1,500	,,
6	properties	,,	1,000	,,
—	,,	,,	900	,,
—	,,	,,	800	,,
2	,,	,,	700	,,
1	property	,,	600	,,
1	,,	,,	500	,,
3	properties	,,	400	,,
4	,,	,,	300	,,
14	,,	,,	200	,,
52	,,	,,	100	,,
64	,,	,,	50	,,
89	,,	,,	25	,,
*313	,,	,,	under 25	

Table No. 7 in the appendix is a comparative statement of the mortality amongst natives employed on mines in Southern Rhodesia for the twelve months January to December, 1921, with the rates for the last thirteen years for comparison.

Infectious, Communicable or Preventable Diseases.

Small-pox.—Numerous outbreaks of small-pox, mostly of a mild type, occurred during the year. Outbreaks were dealt with in the following districts :—Gutu, Selukwe, Umvuma, Buhera, Belingwe, Insiza, Gwelo, Enkeldoorn, Gwanda, Melsetter, Bikita, Chipinga, Ndanga, Victoria, Mtoko, Chilimanzi, Gatooma, Chibi and Shamva.

There were 515 cases reported, of which one occurred amongst Europeans and 514 amongst natives. There were 145 deaths due to this cause, all amongst natives.

This disease continues, in spite of systematic vaccination, to be extremely prevalent amongst indigenous natives in the reserves. As a rule it is mild in type, which adds to the difficulty of diagnosis, as so many persons still believe that the milder types represent a different disease variously designated as kaffir-pox-alastrin-amaas or varioloid. These mild types, however, frequently acquire an increased virulence, with a high proportion of confluent or hæmorrhagic cases, and it is not infrequent to get returns from the same district reporting so many cases of small-pox and so many cases of kaffir-pox. There is little doubt, however, that we are in each instance dealing with small-pox of usually low virulence, which may be ascribed to racial or climatic conditions, but with a tendency to become from time to time increased in virulence and epidemic in character. One of the most noticeable features of the milder types of this disease is how quickly their spread is checked and dies out in the face of systematic vaccination of the population.

Vaccination.—Though compulsory vaccination of the European population is not strictly enforced beyond the law that no unvaccinated children can be admitted to Government or State-aided schools, the European population is fairly well protected in most districts and one hears little of conscientious objectors. Scruples of this nature are quickly overcome, especially where no principle is involved, in the face of danger to the individual or his dependents. Government Medical Officers continue to visit and vaccinate all unvaccinated children in schools in their districts, whilst the vaccination of the native population is undertaken by the district Native Department officials and members of the B.S.A. Police. Altogether 168,003 vaccinations were performed last year.

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* The figure 313 includes all small employers of labour rendering returns.

The native population is not yet entirely protected by vaccination, though now in many districts the majority have been vaccinated. Unfortunately, partly on account of the expense and partly owing to the difficulty of collecting natives a second time for examination, it has been found impossible to collect the natives for subsequent examination, and it is difficult to form any conclusion as to the proportion of successful as against unsuccessful vaccinations. Trial examinations made from time to time show considerable variation in this, the failures being due possibly to faulty technique by careless or irresponsible operators, and also to the fact that the natives cannot themselves be kept under observation and prevented from rubbing or washing off the vaccine. Apparently, however, in the majority of instances the failures do not amount to more than 30 per cent., and frequently considerably less. In face of the difficulty and expense that would be involved in employing only trained vaccinators, the results on the whole are as satisfactory as can be expected. Vaccine lymph of a good quality is obtained from the Union Government vaccine station in Capetown. The cost of this, however, is considerable, approximately £2,000 having been expended during the year on lymph alone, and, as I mentioned in last year's annual report, it is a matter for serious consideration whether it would not be more economical for this Administration to start the manufacture of vaccine lymph for itself.

Typhoid Fever.—There was a decrease of admissions to hospitals on account of this disease, 53 cases having been treated, as against 74 in 1920. Of these, 14 occurred in Salisbury and 25 in Bulawayo.

The mortality rate amongst Europeans in hospital was only 4.25 per cent., the lowest on record. No records are available as to differentiation between typhoid and paratyphoid.

Malta Fever.—There has been a marked increase in the number of cases reported, especially in the Marandellas district. This disease is generally ascribed to the ingestion of unboiled goat's milk, but in the majority of instances no connection in this direction could be traced. The similarity of the *micrococcus melitensis* to the *B. abortus* of cattle and the fact that contagious abortion in cattle is spreading in Southern Rhodesia, more especially in the districts where Malta fever is occurring, have naturally roused suspicions that here, at any rate, the one disease is consequent on the other—in other words, that here the *B. abortus* is responsible for outbreaks of Malta fever in man. A certain amount of work has been done in the Public Health Laboratory here during the year in this direction, but so far no definite clinical or laboratory relation has yet been established.

The further study of Malta fever urgently calls for early research.

Malaria.—The admissions to hospitals on this account were very slightly increased, being 1,060, as against 1,037 in 1920. Of these, 821 were Europeans and 239 natives.

The mortality rate amongst Europeans was singularly low, being only .24 per cent. of admissions.

This disease is endemic throughout Southern Rhodesia, varying in prevalence and virulence in relation to the altitude and rainfall. Apart from exceptional malarial seasons, the towns and larger centres on the high veld and along the railway line are practically free, though in most of them anti-malarial precautions are woefully absent. The disease still continues to prevail, however, from January to June in the rural districts, varying in intensity according to climatic conditions and in proportion to the general intelligence of the settlers in adopting preventative measures. Propaganda work amongst new settlers and others is continued by the issue of circulars and pamphlets dealing with the causes and prevention of this disease.

Blackwater Fever.—This disease is still a standing menace to settlers in the more highly malarious districts, and on account of its high mortality rate is a cause of anxiety to persons resident in these areas. Its prevalence is in direct relation to the prevalence and toxicity of malaria in the district, though the exact causal factor still remains unproved.

Dr. J. G. Thomson, the Investigator from the London Tropical School, has arrived, and he is now engaged in research into this distressing and fatal illness, which seriously affects the beneficial settlement of many parts of the country.

There was a considerable decrease in the number of cases treated in the various hospitals during 1921 over the previous year, being 53 as compared with 70. The death rate was also the lowest on record, being only 11.32 per cent. of those attacked. No special significance can, however, be attached to this, as the morbidity of this disease varies from year to year, and taken over a period of twenty years the average death rate amongst cases treated in Government hospitals is approximately 20 per cent., this being similar to what is recorded in other countries where blackwater fever occurs.

There were 23 deaths registered during the year as due to this disease, being 7.19 per cent. of the total deaths.

Epidemic Influenza.—A recrudescence of influenza of an epidemic character, complicated in many cases with pneumonia of a type similar in character to the great epidemic of 1918, occurred during the month of June. It attacked Europeans and natives alike, the number of cases reported being 266 Europeans and 820 natives, and the number of deaths 10 Europeans and 59 natives.

The number of native cases recorded and deaths registered is in addition to the cases and deaths occurring amongst natives employed on mines.

Encephalitis Lethargica.—A few cases of *encephalitis lethargica* were reported by the Government Medical Officer, Que Que, their occurrence being synchronous with the epidemic of influenza.

Bilharziasis.—This is a serious disease, which is more or less endemic to Rhodesia. Some work was done by the Public Health

Laboratory during the year in the collection and examination of snails obtained from Rhodesian rivers, and known or suspected to be intermediate hosts. The Medical Inspector of Schools reported 46 cases as discovered by him in the course of his routine examination of school children, all directly traceable to bathing in infected pools or rivers.

The protracted history of this disease and its after effects have in the past rendered it one of the most serious of the helminthic infections, but the discovery by Leiper of the intermediate host in certain varieties of fresh water snails and the results obtained by Archibald in Egypt and by others in the treatment by intravenous injection of tartrate of antimony have robbed it of much of its danger. At the same time the danger of bathing in pools and rivers, especially in the neighbourhood of human habitation, whether European or native, cannot be over-estimated.

Infectious and Contagious Diseases of Childhood.—Outbreaks of measles, whooping cough, mumps, chicken-pox and scarlet fever were dealt with during the year, chiefly in connection with school children.

The increase in the child population and their congregation in schools and boarding houses at educational centres have been followed by a marked increase in the prevalence of these diseases, their occurrence now approaching to that of older and more settled communities.

Table No. 8 in the appendix shows infectious diseases reported to this Department during the year 1921.

Government Medical Officers.

The new conditions of service under which Medical Officers are now engaged, and which came into force in January of this year are working well, with mutual advantage to the Medical Officers themselves and to the public, and in no instance has any wish been expressed to revert to the old conditions of service.

It was found during the course of the year that at Umvukwe and Hartley there was insufficient work to justify the retention of a Medical Officer at these stations. They were accordingly withdrawn.

One Medical Officer resigned in order to take up a more advantageous post with the Railway Company, and his place has not been filled, whilst the other Medical Officer was fully occupied on relieving duty throughout the year.

The following brief extracts bearing on the health of the various districts are taken from the Government Medical Officers' reports for the year :—

Salisbury District.—It is probable that the European population of Salisbury is now what was estimated for last year, namely, about 4,000 for the town and 5,000 for the Salisbury district. Last year the population was over-estimated, but judging by the difficulty in obtaining accommodation and the amount of building going on, the above estimate is probably correct.

There were 320 cases of malaria treated in the Salisbury Hospital, with 3 deaths, as compared with 268 cases, with 4 deaths, last year.

The total recorded deaths in the district were 5, as against 10 in 1920 and 7 in 1919. The 3 deaths in hospital were all among coloured, but the 5 deaths in the district were amongst Europeans.

There were 18 cases of blackwater in the European hospital, with 3 deaths, as compared with 25 cases, and 2 deaths, last year. The total recorded deaths in the district were 8, as against 3 in 1920 and 3 in 1919. There were no cases among the native or coloured. In 1920 there were 2 cases among coloured patients, but none among natives. During 16 years' connection with the native hospital I have never seen a case of blackwater in an indigenous native.

Pneumonia.—There were 27 cases, with 5 deaths, as against 17 cases, with 4 deaths, in 1920. In the native hospital there were 83 cases, with 20 deaths, as against 97 cases, with 26 deaths, in 1920.

As recorded last year, the worst cases among natives came from the Tobacco Factory. This is probably due to the natives working in the damp heat which is necessary for the tobacco leaf, and then coming out into the cold air.

There was a severe outbreak of influenza in August, causing a considerable mortality both amongst Europeans and natives, especially the latter. There were 32 cases admitted to the European hospital, with no deaths, but there were 8 European deaths in the district. Last year there were only 10 admissions, with no deaths, to the European hospital, and only one death was recorded in the district.

At the native hospital there were 137 admissions for influenza, with 23 deaths. Of these cases, 116, with 20 deaths, occurred during the month of August.

There have been several small outbreaks of infectious diseases during the year, especially measles and mumps. There were 2 cases of scarlet fever and one death from diphtheria. One case of smallpox occurred in Salisbury in a native. He was at once isolated, and no further cases occurred. The new Isolation Hospital which was opened last year has proved its necessity during the year.

Salisbury Hospital.—There were 1,916 cases admitted to the Salisbury Hospital as follows :—

Europeans	1,107
Natives	809
	1,916

Increased accommodation is badly needed in the European hospital, and it is hoped that another wing will be built next year. The new theatre block and additions to the nurses' home are being built, and will prove of enormous benefit when complete. The new native hospital is in course of erection and expected to be ready for occupation by May.

General.—The water supply has been adequate and satisfactory. The M.O.H. reports that the general health of the town has been good.

Work has been continued on a large scale on the roads and sanitary lanes in town and a marked improvement is to be noted.

BULAWAYO DISTRICT.—The European birth rate is still comparatively high, whilst the death rates, general and infant, are remarkably low.

The incidence of malaria still shows the steady decline which has been noted during the past few years, and cases of blackwater have become comparatively rare.

The number of cases of enteric notified in the town are less than during the year 1920, but the disease is rather more prevalent than is desirable.

The Isolation Hospital proved most useful, as it enabled me to at once segregate and treat 9 cases of mumps from the Milton School boarding houses. One case of measles, one of chicken-pox and a family of four with influenza (for whom accommodation could not at the time be found elsewhere) were also admitted.

With regard to natives, the only point of interest is that the incidence of scurvy has increased as compared with the years 1919 and 1920, as had also the total number of deaths. The phthisis figures remain fairly constant.

GWELO DISTRICT.—*European Population.*—Residing in the town, including the commonage, 925 (males 484, females 441). The district population is returned as 1,049 males and 817 females, but this return includes the districts of Que Que and Selukwe, the population of these two towns not being included, and which are, Que Que 523 (males 299, females 224), and Selukwe 202 (males 107, females 95).

Seasonal Activity of Diseases.—*Influenza.*—Since the so-called Spanish outbreak in 1918, influenza has made its appearance yearly. Last July quite a number of cases occurred in the town and district. The outbreak was more severe on the whole than the previous year and lasted longer, cases coming under notice till the beginning of November. A number of cases were of pneumonic type, and there were three deaths from this cause. Malaria fever was as usual the most frequent cause of ill-health, the type being of the ordinary variety. Three cases of blackwater fever occurred, and one death was reported.

One hundred and ninety-nine Europeans were treated in hospital for various complaints.

Natives.—Influenza was again prevalent this year, and appeared to be at its worst in September. The type was medium in severity on the whole, but a number of cases took the pneumonic form. It was first seen in July, gradually rising in numbers till September, and subsiding in November. I am inclined to think that most of the cases of pneumonia reported during this period were really of the post-influenzal type, although they did not show any marked symptoms of the disease when seen, and so were put under the heading of pneumonia. There was a decrease in the number of malaria fever cases, but the type was more severe, there being four deaths due to the malignant nature of the disease. The other more noted diseases were pneumonia, on which I have remarked above, and rheumatism, of which there were 26 cases. The winter months accounted for numerous cases of coughs and colds, there being nothing special to report on this.

Fourteen cases of phthisis and four of general tuberculosis were treated in hospital, most of the cases coming from the mines in the district.

Three hundred and eighty-eight natives were treated in hospital for various complaints.

Vaccination.—Most of the native population of this district have been vaccinated recently. The European population is also well protected in this respect.

Sanitation.—The bucket system is the one in vogue in the town. On the commonage and in the district the pit system is the usual one gone in for.

Water Supply.—The town water supply is got from bore holes; the water is of an excellent quality, but hard in nature, and the supply plentiful though expensive.

Meteorological.—The rainfall was 38.90 inches for the year under consideration, as compared with 33.83 inches the previous year.

VICTORIA DISTRICT.—The population, as given in the Census returns for 1921, is as follows :—

	Males.	Females.	Total.
Urban	133	89	222
Rural	336	252	588

In the winter months there were a number of cases of sub-acute rheumatism, probably influenzal in origin. These cases were for the most part under treatment for from 6 to 10 months, and relapses occurred frequently, although all cases eventually recovered completely.

As regards the natives in the district, small-pox started at the end of the rainy season and continued on till the late winter. As most of the natives had been previously vaccinated, the outbreak was mild in character and a very small percentage of deaths occurred. This is a great contrast with former epidemics.

The town of Victoria is situated 290 miles from the sea and 3,500 feet above sea level.

The total rainfall was 25.31 inches, which is about the average. The temperature rarely exceeded 90° in the hot weather, and was not lower than 40° in the cold. Sickness was most universal just after the heaviest rains, and especially amongst the people who had just come to the district and were opening up new lands.

The malaria occurring in the district is of the benign tertian type, though a number of cases of malignant tertian occurred amongst those who had been in German East Africa. The Police suffered to an extent more than should be. They take nets with them on patrol, but this does not seem sufficient protection.

In November there was an outbreak of pneumonic influenza at Mashaba, 200 cases being reported, with 14 deaths.

The sanitary condition of the town is not good, but the Sanitary Board are taking the matter up this year. There is overcrowding due to the lack of houses and the increase in the population.

The water for the most part is drawn from the river and led to the houses in water carts. A scheme for a water supply is at present under consideration.

Universal vaccination took place during the winter months, the total number done being 45,000. The whole district is now very well protected, except in the southern part of Chibi. This is a very wild area, and very scattered, so vaccination is difficult and almost impossible.

The leper settlement at Morgenster has had an average of about 90 patients. There are a great number of lepers in the district, and with more care these will be segregated. The telephone has been installed in the Superintendent's house, and the road is under consideration. The ground at the settlement is good, and the inmates should be self-supporting. Several improvements are gradually taking place, but the settlement should be more easily accessible.

Lomagundi District.—*Population.*—The European population, as shown by the Census of May last, is 739.

A township site was laid out by the Government at the mica fields about October, but owing to the general economic depression the mica could not profitably be worked, and this has resulted in a temporary decrease at about the same time owing to numbers leaving.

Meteorological and climatic conditions have been normal for the district. Speaking generally, the conditions of life, *i.e.*, housing and feeding, are tending steadily towards improvement as the settlers become more firmly established.

As regards the severity of the diseases occurring, I think there is a tendency towards milder forms; probably malaria, through increased quinine prophylaxis and better conditions, added to a greater readiness to come to hospital early, is not so severe as in former years. In spite of this, however, blackwater does not appear to be much less frequent, though it is not so dreaded a disease as it used to be. The laity hold that its frequency is due to quinine prophylaxis. There is a certain half-truth in this probably.

The European vaccinations performed during the year amount to only a few European children. There has been no outbreak of small-pox.

I may allude under observations to that invaluable institution—the district nurse. This originated by the Magistrate's wife, and, fostered by grants from the Government and Beit Trust, has been in existence two years now. The Beit Trust grant has, however, been definitely stopped, but the funds, being most economically managed, are, with the Government grant, sufficient for present purposes. The public, I feel sure, appreciate the services of a nurse no less than I do.

There was one case of measles in September. The patient was promptly isolated in the small cottage built for the purpose. Being enabled to do this relieved the school staff at once of worry and anxiety to know what to do. No further case occurred, and there was no interference with the work of the school.

No other children's disease occurred, but there were some cases of a mild nature of malaria during its seasonal incidence.

The children are dosed regularly with quinine, and my impression is that there is a considerable improvement in the health of many boarders through this means.

SHAMVA DISTRICT.—The estimated European population of this district is 554, women and children included.

The seasonal activity of the principal disease, malaria, has centred round the earlier months of the year. It has been more usual for the malarial incidence to be at its highest during the cold months.

Sanitation is in the same condition as it was in the previous year.

There is no village management board appointed yet, and so there is no control, except on the property of the Shamva Mines, Ltd.

The only vaccinations performed have been on the few school children who had escaped vaccination the previous year.

FILABUSI DISTRICT.—*Scurvy.*—A considerable number of scurvy cases have occurred again this year, all amongst natives. The disease again commenced with the rains, one month later than last year, gradually reaching a climax in December; only two cases occurred after the beginning of the year. The worst case was discharged in April. One death occurred in December; after this month it was noticed that all the cases improved.

Malaria.—The main seasonal activity was found to be at the beginning and end of the rainy season, although numerous cases were spread over the rest of the year. Both Europeans and natives were equally affected.

Blackwater Fever.—Only two cases occurred amongst Europeans, one in March and the other in September, the latter proving fatal. No cases occurred amongst the native population to my knowledge. An Indian was reported to have had the disease in April, but I was unable to locate him.

Meteorological and Climatic Conditions.—Taken as a whole, the district is extremely healthy, the greater part of it being at an altitude of over 3,000 feet. Around Belingwe, in the neighbourhood of the native reserve, there is a good deal of low-lying marshy ground. The two cases of blackwater fever which occurred during the year were both men who had been in that neighbourhood.

The rainfall for the year 1921 was 31.02 inches at Filabusi. Last season's rains did not end until May was well advanced, while this season's rains did not start until the end of October.

Sanitation.—The bucket system and incinerators are in general use throughout the district. On the farms deep pit fly-proof latrines are used.

The water supply at Belingwe is from wells, secondarily from the river. The same applies to Fort Rixon. At Shabani the water is pumped up to the township from the river. The new village management board is now responsible for efficient sanitation.

Native conditions remain as before, the great safeguard being the periodical shifting of the kraals. The deficient ventilation of huts probably conduces to tuberculosis, which, I believe, is fairly common.

Particular Diseases occurring in District.—*Venereal Disease.*—Although I have seen numerous cases during the past year, I have not been able to form an opinion as to the percentage incidence amongst the native population.

Small-pox.—An outbreak occurred in the Insiza district; there were sixteen native cases and seven deaths. It had been active for some time before its discovery. The place was cordoned and the whole surrounding country effectively vaccinated, with the result that its spread was promptly checked.

Influenza.—The epidemic appeared to follow the trade routes, affecting the railway line and the main road. The route from Balla-Balla to Shabani, *via* Filabusi and Belingwe, being little used, was hardly affected. Before the epidemic appeared in my district I advised the mines to try gargling and nose-snuffing as a preventive measure. Although Filabusi remained free from the disease, I am not prepared to say that it was due to these measures.

The mines at Shabani did not follow my advice until the epidemic was well established, at which stage they were prepared to try anything; I advised them to try and isolate the cases as far as possible and also contacts. This was partly carried out, but I think the disease at that time was already over its maximum intensity, and improvement soon followed. There were 4 European and 131 native cases at Shabani, with 1 European and 13 native deaths. There were quite a number of cases of the severe pneumonic type, and a *post-mortem* specimen of lung, sent to Johannesburg, was reported to be of the same type as that of the "great epidemic." Vaccine was used in several cases and reported favourably on by the medical officers of the mines.

Filariasis.—I have had five cases during the year of abscesses occurring in Northern natives, which I suspected to be of filarial origin.

Bilharzia.—I have had one mild case of bilharzia in a native who came from the South.

Vaccination Report.—Several thousand vaccinations were performed in the Insiza district during the early part of the year. The whole of the upper portion of Insiza is well protected from small-pox.

Belingwe itself is well protected, and also the southern part of the reserve in the West Nicholson area.

The European population, particularly the children at Shabani, are well protected. It is difficult to estimate the condition at any given time, as the population is a floating one.

Health of Police Force.—The Police Force has maintained a good state of health during the past year, the chief cause of sickness being malaria. I am again urging the various camps to grow more vegetables and some fruit, if possible. It is noticeable that a few troopers suffer from furunculosis at the end of the dry weather.

Rusape District.—*Seasonal Diseases.*—Malaria was moderately prevalent in March, April, May and June. The type generally was mild.

Blackwater.—Four cases occurred in the district during February, March, April and May, three of which I attended. There was one death, the result of suppression of urine. I have seen no native cases.

Influenza has been prevalent since August, both amongst Europeans and natives. Amongst the Europeans actually treated by me, numbering 14, the majority of cases were of the gastric intestinal type, and not of marked severity.

The European sanitation is quite fair. The natives apparently have no ideas on the subject, but are all more or less isolated in kraals.

I have personally vaccinated 31 European children. There are still a few to be done. Weather conditions and the premature breaking up of our school prevented me from doing two of the schools.

A small European hospital has been erected during the year, containing three private wards, nurse's quarters, etc.; funds are not yet available for furnishing, etc.

INYATI DISTRICT.—There has been very little sickness amongst the Europeans in the district, malaria and pneumonia having been exceptionally scarce. Possibly the beginning of the cold season, June and July, are responsible for the few cases, and here most of the cases of malaria are old cases revived by this seasonal change.

The climate is healthy; children especially thrive well and are little affected by sickness. During the hot months there were occasional cases of diarrhœa, amongst both children and adults, mostly due to fly infection; but these are getting less frequent, as better housing accommodation is constantly being provided.

There were one or two isolated cases of influenza in the district amongst Europeans, and some few cases amongst the kraal natives—nothing serious. One case of influenza took the form of an acute neuritis of the arms and legs.

The water supply and source for the camp and Native Department is not good, and requires attention.

Hospital.—A private hospital for natives has been erected and has been of use, especially in connection with serious assault cases that could not at the time be removed to Bulawayo; most of these have been wholly time treated.

MELSETTER DISTRICT.—*European Population.*—The Census taken during the year showed the European population to be 746. Of this number, 414 were males and 332 females.

The year was notable for an extensive outbreak of small-pox in the Sabi and Tanganda valleys, with minor outbreaks in different places. When the outbreak in the Sabi was first known of, it had been in existence for probably three months, and had not been reported by the natives. The outbreak was dealt with by quarantining the infected area, vaccinating all natives in the area, subsequently re-vaccinating unsuccessful cases, and extending the vaccination to the adjoining areas, till eventually a large proportion of the natives in the district were vaccinated. The small epidemics were dealt with on similar lines.

The sanitary state of the Melsetter and Chipinga townships is fairly satisfactory. In each case the water supply is from adjacent streams, and the water is led through the townships in open furrows. These are, of course, very liable to contamination, and only the smallness of the townships and the expense of further improvements justify their continuance. Other sanitary arrangements are satisfactory, and no cases of illness that have occurred appear attributable to sanitary defects.

Vaccinations.—One thousand two hundred and fifty vaccinations were done during the year. In addition, many thousands were done by the Native Department officials and Police. The native population is now as well vaccinated and protected from small-pox as is possible in a district where conditions are so difficult. Practically the whole of the Europeans have also been vaccinated.

ARCTURUS DISTRICT.—The estimated population of the district is 200.

In the middle of the year there was an epidemic of influenza, not of a very severe type; it lasted for a couple of months or more. There were also about that time a few cases of dysentery and enteric fever; also several cases of pneumonia. Syphilis is prevalent among the natives; also leprosy, which is always segregated.

The mine natives are all inoculated against pneumonia.

A district nurse has been jointly employed by the Government and mine, and she is greatly appreciated in the district generally.

All the school children were vaccinated a few months ago.

The past year compares favourably with the previous one as regards sickness, and I would regard it as quite normal.

INYANGA DISTRICT.—The European population amounts to 198, against 170 of last year.

The principal diseases met with during 1921 were malaria and influenza, malaria occurring usually during the early and late months of the year, more or less coinciding with the rainfall. Natives suffer more from this disease than Europeans, and I found many cases of a pernicious type among both, recuperation being exceedingly slow.

The epidemic of influenza during the year was not a severe type, and most probably was introduced by natives from the centres returning to their kraals.

No cases of small-pox were reported; the entire district was vaccinated in 1920. So I conclude the inhabitants, European and native, are efficiently protected.

MARANDELLAS DISTRICT.—Population, 561.

Malaria occurred sporadically from April to December. Where blood smears were taken, the majority showed recurrent malignant tertian, only 3 being new infections.

There were 6 cases of blackwater fever, 2 fatal, all in malarial subjects.

There was a severe outbreak of influenza in May amongst the natives in the Shiota Reserve; 13 deaths were reported. There were also native outbreaks in September and October at Uplands, about 50 cases, with 3 deaths, and in the Inoro-Wedza district 140 cases, deaths unknown—none reported. The type of the disease in both European and native cases was generally mild pneumonic with bloody sputum.

Malta Fever.—Six cases, with no deaths. No connection between the cases has been traced, as all occurred over a large area. There is much contagious abortion in the district, but I understand that this has obtained for several years, and no case of Malta fever has been previously reported.

Incinerators are badly needed, especially for the Police camp. The water supply of the village and Police camp is from the tube wells and is satisfactory. The village management board is taking steps to provide a village incinerator and a native location.

BINDURA DISTRICT.—Estimated European population, 325.

The outstanding disease amongst Europeans showing seasonal activity has been blackwater fever, the last case occurring on the 11th June and the first case of this season on the 24th December. Between the 4th March and the 11th June there were 13 cases; no deaths.

There was an epidemic of influenza in August. I was called to 30 cases, 5 of whom developed pneumonia, 4 being bronchopneumonias and 1 lobar in type. This latter was an intensely stout florid man, who died within a few hours of first being seen. Thirty-eight cases of malaria were seen, only one of which, a child, was severe and persistent in character. Several children had severe acute attacks, which yielded readily to treatment.

Vaccination.—All unvaccinated school children were done, in accordance with instructions, at the end of August, 11 in number. Since the recent report of 2 cases at Shamva, 4 adults and 6 children have been vaccinated, and about 8 more children are to be done.

No hospital exists at Bindura, but an effort was made this year by an elected committee (of which I was a member) to raise funds to start a hospital, to be regarded as a War Memorial. Although the public were most keen, I had to advise most strongly abandoning the scheme, as the funds were totally inadequate, and no prospect of obtaining sufficient to maintain a hospital.

Cases of severe illness at present have been taken into the hotel and nursed there by the district nurse.

There were 9 maternity cases attended in their homes, 5 of whom were attended by the district sister, who also attended 6 of the cases of blackwater fever, 5 in their homes and 1 at the hotel, with most satisfactory results.

BULALIMA-MANGWE DISTRICT.—The Census returns showed the European population was 659.

The village water supply has been greatly improved since my last report. A 3,000 gallon storage tank has been erected, from which supply pipes lead to the occupied stands. The water supply of the Government reserve and school was, on the whole, satisfactory. The school, however, found it necessary occasionally to supplement the supply from the Government well by drawing on the Railway dam, the water of which is peat stained, and appears to contain a good deal of organic matter. The sanitary condition of the township was satisfactory; the streets were freshly gravelled and the stands cleaned up.

CHARTER DISTRICT.—Estimated European population of Charter district, 930; Chilimanzi district, 940.

European diseases were almost entirely confined to (a) malaria, (b) influenza, (c) rheumatic conditions. Malaria was most prevalent during April and May.

Sporadic cases of influenza irregularly distributed as to time and place throughout the year. An epidemic tendency was displayed as a direct result of the Agricultural Show in June. The same remark applies to local visitors to the Salisbury Show.

Rheumatic Conditions were observable throughout the year, the acute forms being manifested towards the end of the rainy season.

Native diseases were principally (a) small-pox, (b) chicken-pox, (c) influenza. Small-pox had been epidemic at the close of 1920, and although vaccinations had been carried out on a large scale, minor outbreaks have been reported constantly in the district. My previous experience had tended towards regarding small-pox as a winter disease, but the 1921 outbreaks have quite negatived this theory. Chicken-pox cases were noted in November and December.

As the European part of the district lies between 4,000 and 5,000 feet, the climate is bracing. The prevailing wind is E. by S.E., this tending to periodic increase in the later winter.

Post-malarial debility, anæmia, splenic enlargement were present in a large proportion of patients at the end of the year. This fact, plus the debilitating effect of the summer temperature, must re-act undesirably on patients exposed to a fresh infection. In only two cases were mosquito nets stated to be habitually used. In no case had quinine been taken systematically as a prophylactic. Where whole families were severely affected, the source of the infection was easily traceable to a dam or water holes near which the dwelling house had been erected for convenience. Many new settlers in the district have no previous experience or knowledge of malaria. The fact of mosquito-borne infection is regarded only as a possible theory or partial explanation by other than the most enlightened settlers.

Native Diseases.—Small-pox.—In January Chibaya's and Mtemo's kraals, near Enkeldoorn, were in quarantine: Disease here was traceable to earlier outbreaks at and near Driefontein Mission. Thence the condition spread to Antelope Farm and a kraal near Mr. Brocklehurst's homestead. The disease was prevalent in the native districts and kraals surrounding Enkeldoorn. A considerable number of vaccinations were done, and now most of the European and native population are protected by vaccination.

Water supply in both townships is doubtful. In Umvuma the Blinkwater runs risks of infection from coolie gardens. In Enkeldoorn the danger is largely from unlined wells, with probability of infection from surface water.

QUE QUE.—The estimated European population of the Que Que Police area is 925, consisting of about 600 adults and 325 children.

Malarial fever and influenza were the chief causes of sickness in this district; in fact, excluding these diseases and their complications, there would be practically no sickness. Although from the European hospital return malarial fever cases predominate, influenza, which broke out in epidemic form in July, caused by far the greater amount of invalidism amongst the Europeans, and was the cause of many deaths and much sickness amongst the natives right up to the end of the year.

A few typical cases of *encephalitis lethargica,* and what appear to be several atypical cases, occurred amongst the natives.

The Que Que township and Globe & Phœnix Mine are supplied with water from the Sebakwe River, and the Gaika Mine from the Que Que River; there were no cases of water-borne diseases contracted in the above areas.

MAZOE.—The population of the district has decreased somewhat during the year, as the following figures show:—

	1920.	1921.
European population ...	700	609
Births	9	4
Deaths	3	2

The decrease in population can be attributed to the closing down of several mines in the district employing a considerable number of white men with families.

Malaria is still the most prevalent disease amongst Europeans. March, April and May are the most trying periods. Several cases of hæmoglobinuria occurred—a decided increase over the preceding year.

Influenza in a mild sporadic form has been prevalent in the district. Several deaths have occurred amongst natives, but I am not aware of any Europeans dying of this disease.

GWANDA.—The estimated European population is 314; 209 males and 105 females.

There was an outbreak of influenza towards the end of the dry season. The cases were practically all mild and very few developed complications. The number of cases was high in some districts, while other districts were almost free.

One case of meningitis occurred on a property close to the township of Gwanda. The cerebro-spinal fluid was examined at the Government Bacteriological Laboratory and was found to contain meningococci.

With regard to the sanitation of the township of Gwanda, the pail system is the usual method. The water supply consists of wells and storage tanks for rain-water. Although there is a river with a constant water supply within a few hundred yards of the township boundary, the township has no frontage on it, and cannot draw on it for water supply. The housing on the whole is suitable. Although there are no unoccupied houses, there is no overcrowding, but in one case a house that has been condemned for some years is being occupied for lack of other accommodation.

NDANGA.—During the year there has been an outbreak of smallpox in the Ndanga and Bikita districts. It is not surprising that this should have occurred, as there is no doubt that infected natives had been visiting their friends in these districts and passing through them for many months.

All Europeans and many thousands of the natives of the two districts have been vaccinated. In this connection the need and utility of a good road was exemplified. The Native Commissioner has constructed two such. On these I was able to motor to different points on two occasions into the Bikita area, where natives were collected, to vaccinate several hundreds in the day, and return to the station at night.

On the 8th May of this year the native hospital was re-opened, after a lapse of five years and eight months. The natives at once began to apply for treatment; and in-patients arrived before the hospital was ready to receive them. In a few weeks the accommodation was strained to its utmost, and has remained so. Out-patients also have come for treatment in numbers that show that the natives are appreciating European medicine and methods. During the year there have been treated : In-patients, 79 new cases; out-patients, 467 new cases; about one-third of the in-patients were women. This is very encouraging, as they are much more conservative than the average male native.

Only the worst cases and those unable to travel are admitted to the hospital; all others are supplied with medicine to be used at their homes. As might be expected, most of the patients are suffering from diseases of long standing, much of a syphilitic nature. I have been asked by the Native Commissioner if I consider that syphilis is increasing amongst the natives. I do not see how it can increase. I have given this question some attention during the past nine years, and it is my opinion that, as far as the Victoria circle is concerned, only a negligible percentage of natives escape this disease. Fortunately, in the native, it responds to treatment very readily in most cases.

In spite of the fact that the hospital and medical officer's quarters had been occupied by Government officials, I found that very little had been done to keep down grass and bush around them. In consequence, the small weekly supply of prison labour allowed has had to be used on work that should have been done years ago.

The health of the Ndanga station is fairly good, and can be still further improved by more clearing and draining.

Public Health Laboratory and Research.

The erection of a new laboratory was finally decided on and the building started during the year in the grounds of the Salisbury Hospital, a particularly convenient site both from the clinical and research standpoint.

Final arrangements were concluded this year with the London Tropical School of Medicine, whereby it was arranged that, in return for a grant of £1,000 per annum, the School should send out a series of senior investigators to undertake research work in the various diseases incidental to the country occurring amongst both Europeans and natives, and of outstanding importance to the health and prosperity of the community.

After consultation with the School, it was decided that investigations should commence with the study of blackwater fever, and Dr. J. G. Thomson, lecturer on Protozoology at the London Tropical School, was selected as the first investigator. He has now arrived, and is carrying on his researches both in Salisbury and in the field. It is not anticipated that he will require to stay in the country later than June or July, as after that date few cases occur. It may, however, be necessary for him to return next malarial season, or his place may be taken by another investigator in some other branch of outstanding importance.

The report of Dr. Orpen, the Bacteriologist, will be found printed in Part. II. of this report.

Hospitals and Asylums.

A proportion of the loan raised for capital expenditure was set aside for hospital extension and public health purposes, and it is pleasing to report that considerable progress in the long-delayed building programme mapped out has already been made. The new Public Health and Research Laboratory is now completed and working. The new Native Hospital in Salisbury, which has been urgently required and the subject of much correspondence for years, is now nearing completion, whilst extensive additions to the nursing home at the Salisbury Hospital are also well in hand. A new nurses' home has also been completed at the Shamva Hospital.

In 1920 the Red Cross donated to Southern Rhodesia the sum of £4,500 out of its surplus war funds to be devoted to hospitals and similar institutions, and £1,500 of this sum was allocated to Salisbury and Bulawayo respectively, the balance being distributed amongst cottage hospitals and nursing homes in other districts as it was required. The sum donated to the Salisbury Hospital, with the necessary balance from public funds, is now being expended in the erection of a theatre and X-ray block at the Salisbury Hospital; this to be a standing memorial to the reciprocity between Great Britain and her Colonies in the Great War.

A small cottage hospital has been completed at Rusape, this being built partly out of local subscriptions and partly from Government grants, plus a proportion of the available Red Cross donation. This is also a memorial building being dedicated to the men of the Rusape district who made the great sacrifice during the war.

The further new buildings and extensions contemplated as funds become available are:—Necessary and urgent extensions to the Ingutsheni Mental Hospital; a new nurses' home and, if funds permit, a new hospital at Victoria; extensions to the native wards at Gwelo, and houses for Government Medical Officers in one or two of the remote districts. It is improbable, however, that all this can be taken in hand this year.

Admissions.—The total admissions to hospitals continue to increase both amongst Europeans and natives, 3,273 Europeans and 3,196 natives being admitted for treatment into public hospitals during 1921. The nosological returns from these hospitals indicate that the character of the diseases for which patients are now admitted is slowly changing, there being a proportionate decrease in the cases of malaria and other diseases incidental to the climate, and a marked increase in general diseases and surgical ailments. That is to say, from the health point of view the country is slowly but surely passing away from pioneer conditions and is gradually conforming more closely to conditions prevailing in the Union and elsewhere.

Tables Nos. 9 to 16 in the appendix show the cases with mortality rate per cent. admitted to hospitals, also the admissions from principal diseases, with mortality rates, during 1921 as compared with 1920.

Expenditure.—Earnings from paying patients in Government hospitals, exclusive of Ingutsheni Mental Hospital, amounted to £15,779, being an increase of £1,392 over last year, whilst the revenue actually collected and brought to account amounted to £13,859, being an increase on 1920 of £1,691.

The gross expenditure on hospitals amounted to £38,381, leaving a deficit of £24,522. This gross expenditure was in excess of 1920 by £1,525, and it will be noted that in this case the increase in expenditure was approximately balanced by the increase in revenue collected.

Tables Nos. 17 to 20 in the appendix show the earnings from paying patients; the number of beds in each Government hospital and Ingutsheni Mental Hospital, the daily average of patients treated, and the revenue and expenditure of each; the return of Government and pauper patients treated in Government hospitals during 1921, also the average cost per head at the several Government hospitals and Ingutsheni Mental Hospital.

Ingutsheni Mental Hospital.

In his report for the year the Medical Superintendent draws attention to the heavy list of arrears of buildings, the most important being the European female hospital, and an extension for the accommodation of native female lunatics.

The mental hospital is now overcrowded and the Medical Superintendent urges the necessity of the adoption of a scheme for further extension.

A new kitchen was erected during the year under review, the old kitchens being converted into a larder and additional staff quarters.

Further ground available for agriculture and other purposes was acquired during the year. The half of the block known as the Hillside Veterinary Camp and Mr. Edmunds' house on this block was also taken over and utilised as additional quarters for married officials.

Fifty-five cases were admitted during the year. The total average number resident was 157, as against 154 during the previous year. There remains on the register at the 31st December, 1921, 183 patients, of whom 180 were in residence, 121 of these being native male patients, 28 native female patients, and 31 European male patients. Three male natives were absent on probation. The total number treated throughout the year was 220.

The report of the Medical Superintendent will be found in Part II. of this report.

Morgenster Leper Settlement.

No further extensions or new buildings in the Settlement have been undertaken this year on account of lack of funds, and consequently no effort has yet been made to thoroughly search for and isolate all native lepers in the country, of whom it is roughly estimated there must be at least 1,000, if not more.

There were 96 lepers segregated at the Settlement on 31st December, 1920, and 94 on the same date in 1921. Of these, 65 were males and 29 females. There were 15 admissions, 6 deaths, 2 discharged, whilst 10 effected their escape.

There is a wide field for the better and more efficient segregation of these unfortunates, not only for the general safety of others, but also that they may be brought within the reach of the more modern methods of treatment. To undertake this, however, on a large scale, and to provide for up-to-date methods of treatment under skilled medical advice, would entail a large annual expenditure for many years to come.

At present all that can be done is to segregate and provide for the cases we can, the rest being isolated under the supervision of the various Native Commissioners as they are reported. The Jesuit Mission at Driefontein applied for and obtained permission this year to segregate and care for a small number of their own people in a suitable place on their own land which was inspected and approved.

Legislation.

A new Public Health Act, framed somewhat on the lines of the Public Health Act of 1919 of the Union of South Africa, was prepared, the intention being to submit it at the next session of the Legislative Council. In view of the political situation and the probability of a change of Administration, it was ultimately decided that it would be advisable to hold it back and leave it to the new Government to bring into force, if it saw fit.

Foods and Drugs Act.—Difficulties have occurred in securing convictions under this Act in respect of milk adulteration, owing to the fact that standards for milk are not specifically provided for in the Act, though laid down in the Dairy Amendment Ordinance of 1914, which, however, is a permissory Ordinance and not generally adopted. It is hoped to overcome this, however, at an early date.

Leprosy Regulations.—Regulations framed under the Leprosy Ordinance of 1919 were finally approved and are now in force. These provide the necessary machinery for the proper control and care of those persons segregated under the provisions of the above Act.

Traffic in Opium and Habit-forming Drugs.—The terms of a proclamation dealing with the above in accordance with the recommendations of the International Opium Convention of 1912 are at present the subject of consideration, and it is anticipated will be agreed to at an early date.

Municipalities and Local Authorities.

The regulations for the medical examination and treatment of natives in domestic and other employment in towns have now been completed and approved, but have not yet been adopted by any of the municipalities, questions regarding the responsibility for the treatment being still one of the stumbling blocks, though the Government has conceded a great deal in this direction. Fear of what the ultimate expenditure may amount to is apparently one of the points at the back of the minds of most of the councillors concerned, a short-sighted view to adopt if the results are likely to be as beneficial to the community generally as many people believe.

There is no change in the system of sanitary services of any of the towns or villages, which are on the whole as efficient as they can be under the circumstances. Attention, however, should be directed to the destruction of flies and the construction of fly-proof latrines and privies in towns and villages. The municipal fever hospitals at Salisbury and Bulawayo have more than justified their existence, and now supply a long felt want.

A. M. FLEMING,
Medical Director.

PART II.

Pasteur Institute and Public Health Laboratory.

ANNUAL REPORT FOR YEAR 1921.

During the year a new laboratory was decided on, and its erection began in the hospital grounds, and a research worker was appointed in the person of Dr. J. G. Thomson, of the London Tropical School of Medicine, who has since arrived with his assistant. It is hoped, therefore, that this year will show great progress and results of great value.

Pasteur Institute.

During the year the strain of fixed virus was kept going satisfactorily, and there was no sickness among the rabbits. Proper rooms for the infected and stock animals are included in the new laboratory, and this will make supervision and work generally much easier.

Eleven patients were treated, all from Northern Rhodesia, where the disease seems very persistent. We have had no cases from Southern Rhodesia since 1913, and no cases from other parts for some considerable time. The fees now charged will help to defray the cost of upkeep.

The patients were as follows (and so far as I know there were no deaths):—

1. Native male—bitten by dog; supposed rabid.
2. European male—bitten by dog; supposed rabid.
3. European male—bitten by dog; supposed rabid.
4. European female—bitten by dog; supposed rabid.
5. Native male—bitten by dog; supposed rabid.
6. Native male—bitten by dog; supposed rabid.
7. European female—bitten by cat; supposed rabid.
8. European female—bitten by dog; certified rabid.
9. European male—bitten by dog; certified rabid.
10. European male—bitten by dog; certified rabid.
11. European male—bitten by dog; supposed rabid.

We rarely have any particulars as to the reasons for considering the animals rabid, so it is impossible to classify as usual in the three groups:—"Supposed rabid," "Certified rabid by Veterinary Surgeon," and "Proved rabid by inoculation."

Public Health Laboratory.

A.—ANALYSIS OF WORK DONE.

1. RESEARCH.—It was planned to make bilharzial infection the main subject of study, and a number of snails were collected personally at Umtali and subsequently examined. A further number was sent later by that town, and a number of natives at the Salisbury Gaol were examined. The Native Department was then approached with a view to asking each Native Commissioner to send a few snails from the nearest stream, so that a real survey of the Territory could be made. It was hoped that a thousand or so snails would thus be collected, but we received only 12 snails (from Hartley). Various

towns were then asked for snails, and a magnificent response in the shape of one snail and half-a-dozen slugs from one town resulted, with later on some snails from the Native Commissioner, Mazoe. All this was very disappointing and wasted much time, and it is to be hoped that our research worker will receive better support.

Pending the non-arrival of the above material, no other definite line could be followed, and it was thought best to study anything of importance as it arose. In this way some little work was done on dysentery, blackwater, syphilis and Malta fever, and some work was done on anti-scorbutic diets. Altogether about 200 examinations were made, the results being given under the different disease headings.

2. Routine.—A good increase in the work done is to be noted, 814 examinations being made in 1921, as opposed to 560 in 1920, with a corresponding increase in fees earned. The methods employed were as follows :—

(a) *For bacteria A. protozoa—*	
Microscopical examinations	350
Agglutination tests	107
Preparation of vaccines	79
Decomplementising serum	39
Cultural examinations	100
Bacteriological analyses	9
Biologic test	1
(b) *For parasitic worms—*	
Microscopical examinations	24
Cultural examination	1
(c) *Pathological changes—*	
Microscopical examinations	8
Sectional examinations	16
Urine examinations	59
(d) *Chemical—*	
Tests	8
Estimations	2
(e) *Medico-legal—*	
Microscopical examinations	2
Chemical examinations	9
Total	814

B.—Remarks on Diseases Dealt With.

Malaria.—One hundred and eighty-four blood smears were examined, with 27 positive results; while 17 others were probably malaria (pigmented hyalines, etc.). There were very few positives in the latter half of the year. The type of parasite found was almost invariably the malignant (P. falciparum).

Blackwater.—A few smears were examined specially under research, but nothing special was made out. P. falciparum was found. Purple-staining granules were noted several times in the large mono-nuclear leucocytes. These seem to be common in malaria and blackwater, but their significance is at present unknown. It is unlikely that they are parasitic in nature.

Enteric and Paratyphoid.—Fifty-three agglutination tests were made for this group of diseases, with 13 positive and 2 doubtful results. All the positive were typhoid except one, which was paratyphoid B. An increasing number of organisms is now known to cause enteric-like symptoms, and should be treated for if the typhoid and paratyphoid are negative.

Tuberculosis.—Sputum, urine, pus, tissues and cerebro-spinal fluid were tested 46 times, with 8 positive results (all pulmonary tuberculosis). The disease seems satisfactorily and fairly uncommon still in these parts compared with other countries.

Other Lung Conditions.—The following organisms were isolated from sputum in order of frequency :—Pneumococci, M. catarrhalis, staphylococci, B. influenzæ, Friedlander, diphtheroids, streptococci and B. pertussis (whooping cough). There seems to have been little true influenza, as the B. influenzæ found was generally present, apparently as a secondary infection. It has been reported recently that a new organism called B. pneumosintes has been found in influenza, which may be the cause of the disease; it belongs to the filtrable viruses.

Suppurative Conditions.—The following organisms were isolated in order of frequency :—Staphylococci, diphtheroids, streptococci, B. coli, pneumococci, M. tetragenus, B. pyocyaneus, Vincent's organisms, enterococcus, and once (from a liver abscess) amœbæ.

Diseases of Urinary System.—True nephritis seemed not very common, but there was a fair number of positives in the latter half of the year. Cystitis and pyuria were commonest. Bacilluria was often found, B. coli being the usual organism.

Gonorrhœa.—Thirty-eight examinations gave 12 positives and 5 probables. A recent article in a medical journal throws doubt on the gonococcus being the cause of the disease, but the argument is not very convincing. On the other hand, there seems no doubt that cases resembling gonorrhœa can be caused by other organisms, perhaps diphtheroid bacilli, for instance; and I should mention here that we found several times, in gonorrhœa-like conditions, a streptococcus of peculiar staining by gram, which seemed to be the causal agent. This organism will be studied further.

Syphilis.—Serum was decomplementised 39 times and sent to Johannesburg for the Wasserman test. In several cases parallel tests were specially made here with the Sachs-Giorgi test (which seems as good as Wasserman) and the "Formol-gel" test. It is to be hoped that the complicated Wasserman test, which in the absence of a specific antigen has no satisfactory reason for its results, will soon be replaced by some simpler test. A couple of cases were also tested by microscopical examination. A dark ground condenser was badly needed and has since been received.

Bilharziosis.—Fifteen urine examinations were made under routine, with 4 positives. An interesting case of liver cirrhosis possibly due to bilharzia is to be noted. Under research, over a hundred snails were examined (from Umtali, Hartley, Gwelo and Mazoe). They proved to be of three kinds—planorbis pfeifferi, physopsis africana and limnæa natalensis. Bilharzial cercariæ were found in a small proportion of physopsis, but not in planorbis or limnæa, while the latter snail was found to harbour fasciola hepatica (liver fluke). These results are similar to those obtained in the Union. About 40 examinations were made of natives who are heavily infected in this Territory. Two examinations of water for cercariæ were made.

Tumours.—Sixteen growths were examined, of which 6 proved to be malignant, while 2 were probably malignant or pre-cancerous.

Tick Fever.—Four blood smears; all negative. We have not had a positive for some time, though the tick (Ornithodorus moubata) is common.

Malta Fever.—Thirty-eight agglutination tests gave 11 positive and 3 doubtful results, most of the cases being from the Marandellas district. This is a distinct increase, though in the past more cases existed probably than were suspected. A very interesting point is the connection between this disease and contagious abortion. The practical identity of the two organisms was first pointed out, I believe, in 1915. Some special work was done therefore by us, and Mr. Bevan has also studied the question and recently gave a very interesting lecture on the subject. There seems no doubt that in culture, morphology and serum re-action there is such close similarity that there is almost identity. Agglutination and absorption tests confirmed this. The question to be solved is whether Malta fever can be contracted from the milk of a cow which is infected with the bacillus of contagious abortion. The number of cases of Malta fever from Marandellas, where contagious abortion is very common, certainly points to this. The question then arises, why is Malta fever not commoner? Possibly some difference in virulence or site of infection decides. We are attempting to obtain the Rhodesian strains of Malta fever.

Dysentery.—Fourteen specimens were examined, but no amœbæ found, except E. coli in one case. Several cases were specially examined; one showed E. histolytica and one a bacillus resembling B. dysenteriæ. It is to be noted that dysenteric symptoms may be due to bacilli other than B. dysenteriæ, and to protozoa other than E. histolytica. I think bacillary dysentery is commoner here.

Intestinal Worms.—Ascaris and oxyuris were found several times and ankylostoma once.

Diphtheria.—Ten examinations showed one suspicious and one positive (in December). As I assume all cases would be examined, there cannot have been many cases.

Trypanosomiasis.—One native from the North showed trypanosomes of T. gambiense type; animal inoculations confirmed this, and the strain was handed over to Mr. Bevan.

Scurvy.—It is desirable that an anti-scorbutic article of diet be found for natives that will be inexpensive, palatable and easily prepared. There is strong *a priori* evidence that such articles exist in a rough and ready form, such as Koumiss and Joghurt in Europe, and in the fermented grain foods of the natives here. Some valuable work was done by Miss Doidge in the Union on kaffir beer and the Basuto "Leting." I have begun a series of experiments on another fermented food called Ama Hewu, which is cheap, easily made and widely known. So far the organisms concerned seem very varied and a matter of chance largely (B. acidi lactici, B. levans, and two unidentified organisms having been found so far). But I hope to find the most suitable organism this year, then to test the actual anti-scorbutic power, and then to find the easiest and most certain method of preparation. Made as it is from mealie meal, its cost will be negligible.

Malala Wine.—This name is given to the naturally fermented juice of the native palm tree. Two samples were examined and found to contain much alcohol. The drink is well known in East Africa as well, and its results are extremely harmful. Probably some other substance than alcohol is also present, as was found to be the case with quilika.

Meningitis.—Meningococcus was found in the cerebral-spinal fluid of a Gwanda case, and was probably present in 5 out of 8 contacts.

Medico-legal.—Examinations were made of blood stains, hair, clothing and snuff.

Water Examinations.—The water supply at Victoria and Salisbury was tested several times. The filtration at the latter place is to be improved as a result.

Vaccines.—Seventy-nine autogenous vaccines were prepared, and from enquiries made seem to have given very satisfactory results.

C.—Statement of Fees Earned.

The fees classified below as "Government" are for non-paying patients, Police and other Government or gratuitous work. "Private" means fees from doctors, and represent actual cash.

	1920.			1921.		
Pasteur Institute—Private ...	£13	2	6	£71	5	0
Laboratory—Private	108	2	0	315	4	0
Government	41	14	6	107	1	6
	£162	19	0	£493	10	6

Our fees were raised in 1921, which accounts for some of the increase; but allowing for this, the fees have more than doubled. With our new laboratory we hope to do better still, and it should be realised that financial support to the laboratory is money well invested. If, as I hope, it be possible later to undertake the provision of small-pox lymph and other vaccines, a saving of some thousands a year will be made, and the laboratory will become more than self-supporting, and be indeed a source of income.

L. J. JOHN ORPEN,
Bacteriologist.

Annual Report of the Medical Superintendent, Ingutsheni Mental Hospital.

On the first day of January, 1921, there were 165 patients on the register. During the year 55 were admitted and 15 were discharged recovered; 1 transferred to Valkenberg, 2 to Pretoria, and 19 died. On 31st December, 1921, there remained on the register 183 patients. In residence there were 180, *i.e.*, 121 male natives, 28 female natives and 31 male Europeans. Three male natives were absent on probation. The total number under treatment during the year was 220. There is accommodation for 36 male Europeans, 124 male natives and 20 native females.

The 55 cases admitted included 1 male European and 2 male native re-admissions. Two male Europeans belonging to the Transvaal Province were sent back to Pretoria unrecovered.

The daily average number resident was 167, as against 154 in the previous year. The recovery rate calculated on the number of admissions, excluding patients discharged by transfer, was 27.27. The death rate calculated on the total number of patients under treatment was 8.63.

One inquest was held—a male native who died from the effects of injuries inflicted by another patient with an axe while under the influence of epileptic excitement. There was one other somewhat serious accident to a male native employed digging holes in the new ground near the military reserve. It appears that he exposed a box of cartridges which somehow exploded, causing several nasty wounds. Except for some weakness through loss of blood, he was not much the worse for his unpleasant experience.

The discharges were fewer and the recovery rate not so good as in previous years. This, I think, is accounted for by the greater number of congenital cases admitted during the year. Probably the native is beginning to realise that weak-minded people can be sent here, and that they do not care to attend to them at their homes any longer.

There were only three attempts to escape, one being absent for one night. The latter, a European, turned up the following day in time for breakfast.

Mechanical restraint was not used during the year. Seclusion had to be used in the case of one male native on two occasions. The reason for seclusion was for an attack of epileptis furor with uncontrollable violence.

Probation was allowed in 5 cases, 2 of whom were discharged, while 3 remained on probation at the end of the year.

The farm and garden continue to show satisfactory results. The mealie crop, which looked promising at the beginning of the year, was attacked by army-worm, resulting in considerable damage and loss of yield. Notwithstanding this loss the harvest yielded 369 bags of mealie meal, a useful contribution to our requirements. Ample supply of milk and the greater portion of the butter used were obtained from our own dairy. The dairy herd, which was started in 1916 with a few native cows, now contains some good animals, and, together with pigs, are a useful source of revenue.

The windmill water supply failed at a critical time during the winter and impeded garden operations. Consequently several lots of vegetables had to be bought. This outlay, however, was more than compensated for by sales of other produce. A grant for the erection of a petrol pump was made in October, and it is only now, after vexatious delays, that a start is being made. A petrol pump supplies a much-felt want, and will, I hope, enable us to keep up a more constant supply of water.

A start has been made by the Public Works Department in building a new kitchen and in converting the existing kitchen and larder into staff quarters.

There is still a heavy list of arrears of buildings, the most important being a European female hospital. At present European female mental cases have to be detained in gaols for long periods, and instead of advocating early treatment while the disorder is in a remediable stage, we have to use our influence to keep insane female Europeans in their homes. Under the existing conditions the proper course is to send them to a suitable institution in the South, but, here again, accommodation is not always available. Having incidentally referred to the difficulty of dealing with the female European insane, I would add that in my opinion the complete separation from relatives and friends, caused by transfer to one of the Union hospitals, is not beneficial, and not in the best interests of the patients.

There is also urgent need for more accommodation for native females. There has been a rapid increase of numbers in this division of the hospital, and it is imperative that additional accommodation should be proceeded with as early as possible.

Excepting the European male division, the hospital is overcrowded. In submitting a list of building requirements at the end of the year I pointed out that if the scheme proposed is approved the congestion in the male native division would be relieved by occupying the native female ward with sick and infirm male natives. We have now reached the stage when it is necessary to make special provision for separate accommodation for the sick and the aged.

Regarding maintenance of buildings, I take this opportunity of calling attention to the need of painting the exterior of the older portion, which is showing distinct signs of deterioration. I hope this requirement will not be overlooked this year, for it is really an expensive policy to allow buildings to deteriorate for want of timely attention.

The patients, with staff supervision, were able to build a dairy and cow shed.

General maintenance is higher than it should ordinarily have been. This is specially applicable to equipment, and is due to soaring prices at the end of 1920, when buyers decided to purchase large stocks in advance of requirements, hence this hospital holds supplies that could have been well held over. On the other hand, by some extraordinary arrangements, stationery, electric light, telephone rental and dipping fees do not figure in maintenance expenditure, as, of course, they should.

Revenue from paying patients and sales of produce and live stock show a substantial increase, the total amount derived from these sources being £1,179 14s., *i.e.*, maintenance fees, £1,084; sales of live stock, farm and garden produce, £95 14s.; supplies from farm and garden for the use of the establishment amounts in value to £858 12s. There were outstanding from maintenance fees and sales the sum of £126 2s. 6d. on the 31st December, 1921.

The total expenditure for the year, including produce from the farm and garden, was £6,885 6s. 1d. This works out at £41 4s. 7¾d. per patient per annum.

The cost of maintenance, including hospital, farm and garden produce, is 2s. 3d., and the cost per patient per diem, excluding produce, is 1s. 11d. The net cost to the Government, after deducting revenue from hospital vote of maintenance, is 1s. 7d., which is a decrease of a penny per caput per diem on the cost in the previous year. This low cost of maintenance, I think, is due to cutting down every possible expense, to the useful employment of all available labour, and to some of the contracts being lower than last year.

In conclusion, I am glad to report that there were no changes in the personnel of the staff during the year. And in the administration of this rapidly-growing institution for another year my thanks are due to them for their co-operation and assistance.

W. M. EATON,
Medical Superintendent.

Table 1.—EUROPEAN BIRTHS REGISTERED.

	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	
	Percentage of total births.	Percentage of total births.	Percentage of total births.	Percentage of total births.	Percentage of total births.	Percentage of total births.	Percentage of total births.	Percentage of total births.	Totals Males and females.
Father and mother British	57.77	58.42	61.54	57.08	57.53	54.63	54.39	58.05	530
Father and mother Dutch	21.12	23.85	20.03	24.56	24.33	25.80	28.77	25.41	232
Father and mother Jewish	4.25	3.95	3.93	3.27	2.40	2.10	2.11	1.42	13
Father and mother Italian	.80	.51	.37	.58	.38	.80	.70	.33	3
Father and mother Greek	1.20	1.02	.25	.94	.38	.93	.58	.87	8
Father and mother French	.13	...	...	...	...	.13	...	...	...
Father and mother Belgian	...	...	...	...	...	...	...	.10	1
Father and mother Swedish	.13	.13	.12	.23	.25	...	...	.22	2
Father and mother Turkish	.13	...	...	...	...	.13	...	.10	1
Father and mother Norwegian	...	...	...	.12	.12	...	...	...	...
Father and mother American	.27	...	.37	...	...	...	.12	.22	2
Father and mother Portuguese	...	.26	...	.12	...	...	...	.10	1
Father and mother Roumanian	.53	.13	.37	.12	...	.26	...	.33	3
Father and mother Swiss	...	.26	...	...	...	...	.35	...	...
Father and mother Russian	...	...	...	...	...	...	...	.65	6
Father and mother Austrian	.13	.26	.12	.12	...	.26	.12	...	...
Father and mother German	.13	.13	.12	.23	.38	.13	.23	...	...
Father British, mother Dutch	7.57	5.87	6.63	6.78	6.72	8.33	7.72	6.46	59
Father British, mother French	.40	.38	...	...	.12	.26	.23	...	...
Father British, mother Jewish	...	...	...	...	...	...	...	.10	1
Father British, mother Japanese	...	.13	...	...	...	...	...	...	...
Father British, mother Norwegian	...	...	...	...	...	.26	...	.22	2
Father British, mother Russian	.13	...	...	.23	...	.13	...	...	...
Father British, mother Danish	...	.13	.12	...	...	...	...	...	...
Father British, mother Swedish	.13	.26	.12	...	...	...	...	...	...
Father British, mother American	...	.26	.37	.12	...	...	.12	...	...
Father British, mother German	.66	.51	.49	.47	.88	.53	...	...	...
Father Belgian, mother British	...	...	...	...	...	...	...	.10	1
Father Dutch, mother British	.53	1.02	1.23	1.28	2.15	1.85	2.22	2.19	20
Father Dutch, mother German	...	...	...	...	...	...	...	.10	1
Father Jewish, mother British	.13	.26	.25	.23	.12	.13	.12	.43	4
Father Jewish, mother Dutch	...	.38	.12	...	.12	...	...	...	...
Father Italian, mother British	.13	...	.12	...	...	...	...	...	...
Father Italian, mother Dutch	.13	.13	.12	...	...	.13	.12	.33	3
Father Italian, mother Egyptian	...	...	.12	...	.12	...	...	...	...
Father Italian, mother Russian	...	...	...	.12	...	...	...	...	...
Father Greek, mother British	.13	...	...	...	...	...	.12	...	...
Father Greek, mother Dutch	...	...	.25	.23	...	.13	.12	...	...
Father Greek, mother Roumanian	...	...	...	.12	.12	...	...	...	...
Father Greek, mother Italian	...	...	...	...	...	...	...	.10	1
Father Greek, mother Egyptian	...	...	.12	...	...	.13	...	...	...
Father French, mother British	.13	...	...	...	...	.26	...	...	...
Father Danish, mother British	...	...	...	.12	...	.13	.12	...	...
Father Serbian, mother German	...	...	...	...	...	...	...	.10	1
Father Swiss, mother German	.13	...	...	.12	...	...	...	...	...
Father Russian, mother British	...	...	.25	.12	.12	...	...	.10	1
Father Russian, mother Dutch	...	...	.12	...	...	...	...	...	...
Father Russian, mother Austrian	...	...	...	...	...	.13	...	.10	1
Father Russian, mother German	.13	...	.25	.12	...	...	...	...	...
Father Russian, mother Spanish	...	...	...	...	...	.13	...	...	...
Father Norwegian, mother British	...	...	...	...	.12	...	...	...	...
Father Swedish, mother British	.13	...	.12	...	.12	...	...	...	...
Father Swedish, mother Dutch	.13	...	.12	.35	...	...	...	...	...
Father American, mother British	...	.38	.49	.23	.12	...	...	...	...
Father American, mother Dutch	.13	...	...	.23	...	...	.12	.10	1
Father American, mother Greek	...	...	.12	...	...	...	...	...	...
Father Austrian, mother British	.13	...	.12	...	.12	...	...	...	...
Father Austrian, mother Russian	.27	...	...	.12	.12	...	...	...	...
Father German, mother British	.13	.13	.25	.23	.38	.53	.23	...	...
Father German, mother Dutch	.66	.38	.37	.12	.25	.13	.23	.10	1
Father German, mother Jewish	.13	.13	...	.12	...	...	...	...	...
Father German, mother Swiss	.13	...	...	...	...	...	...	...	...
Father German, mother Russian	.13	...	...	...	...	...	...	...	...
Father Bulgarian, mother Russian	.27	...	...	...	...	...	...	...	...
Father Roumanian, mother Jewish	...	...	...	...	...	...	...	.10	1
Father Roumanian, mother Russian	...	...	...	...	...	.13	...	.22	2
Father French, mother Belgian	...	...	...	...	...	...	.12	...	...
Father Portuguese, mother British	...	...	...	...	...	...	.12	.10	1
Illegitimate — mother of European parentage, paternal parentage unknown	.53	.51	.49	1.29	2.15	1.32	.94	1.09	10
Total births	753	784	815	855	789	756	855	...	913

TABLE 2.

EUROPEAN BIRTHS, 1921.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Salisbury ...	23	8	15	26	24	20	23	26	27	22	25	16	255
Bulawayo ...	26	24	19	22	31	21	31	24	17	24	25	26	290
Umtali ...	8	12	8	8	4	6	3	5	11	7	5	6	83
Hartley ...	2	...	3	...	1	...	...	...	...	...	...	2	8
Gwelo ...	4	4	2	3	8	10	8	4	9	4	5	8	69
Gwanda ...	...	...	...	1	...	...	1	...	...	3	...	...	5
Gatooma ...	5	1	1	4	3	1	2	3	5	5	3	4	37
Charter ...	...	4	4	2	2	2	2	6	4	3	3	4	36
Que Que ...	1	2	4	4	1	3	3	4	2	1	3	1	29
Victoria ...	3	2	1	...	3	2	4	2	3	5	...	4	29
Melsetter ...	2	1	7	3	3	1	1	4	3	3	1	2	31
Selukwe ...	...	2	2	1	1	...	2	1	1	...	2	...	12
Umvuma ...	3	1	2	3	2	1	4	4	...	2	5	2	29
Totals	77	61	68	77	83	67	84	83	82	79	77	75	913

TABLE 2A.

EUROPEAN DEATHS, 1921.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Salisbury ...	7	3	10	8	13	9	5	12	8	6	9	6	96
Bulawayo ...	6	5	8	9	6	7	7	14	10	10	8	5	95
Umtali ...	1	4	2	4	9	4	4	2	3	1	2	3	39
Hartley ...	...	...	...	...	4	...	1	...	1	...	...	...	6
Gwelo ...	1	1	1	2	...	3	2	3	4	2	2	1	22
Gwanda ...	...	...	1	1	1	...	...	...	1	3	...	...	7
Gatooma ...	...	1	2	2	2	...	1	5	1	...	2	1	17
Charter ...	1	...	2	...	1	...	...	...	...	...	...	1	5
Que Que ...	2	1	1	...	...	...	1	3	...	1	...	...	9
Victoria ...	...	...	1	...	4	1	1	1	...	2	1	1	12
Melsetter ...	3	...	...	...	...	...	...	...	1	1	...	...	5
Selukwe ..	...	...	...	1	...	...	...	...	...	...	...	...	1
Umvuma ...	...	...	...	...	...	...	1	...	2	2	1	...	6
Totals	21	15	28	27	40	24	23	40	31	28	25	18	320

Table 3.

EUROPEAN DEATHS, 1921.

Age Periods.	Males.	Females.	Totals.
0—1	29	28	57
1—5	16	6	22
5—15	8	8	16
15—25	12	7	19
25—35	18	12	30
35—45	34	14	48
45—55	31	18	49
55—65	36	13	49
65—75	9	9	18
75—85 and over ...	5	5	10
Age unknown ...	2	...	2
All ages ...	200	120	320

TABLE 4.—RETURN OF DEATHS REGISTERED, 1921.

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0—1		1—5		5—15		15—25		25—35		35—45		45—55		55—65		65—75		75—85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
I. GENERAL DISEASES.																																
1. Typhoid fever	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4	...
4. Malaria	2	3	5	...	3	2	...	2	...	...	1	1	2	...	2	1	...	...	...	...	...	...	15	9	...	...	11	1	11	1	26	10
4a. Blackwater fever	...	...	...	...	...	...	3	...	4	1	6	...	4	1	3	...	...	1	...	...	...	...	20	3	1	...	...	...	1	...	21	3
8. Whooping cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...
9. Diphtheria and croup	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1
10. Influenza	1	2	1	...	1	...	4	1	1	3	3	2	2	2	...	1	2	1	...	...	...	...	15	12	1	1	71	...	72	1	87	13
14. Dysentery	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	1	1	2	...	6	...	8	...	9	1
18. Erysipelas	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1
20. Purulent infection and septicæmia ...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	12	...	12	...	14	...
24. Tetanus	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	4	...	4	...	4	1
26. Pellagra	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
27. Beri-beri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
28. Tuberculosis of the lungs	...	...	...	...	...	...	...	...	2	...	3	...	1	1	3	...	...	...	...	...	...	...	9	1	...	...	83	3	83	3	92	4
29. Acute miliary tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2
30. Tuberculous meningitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
31. Abdominal tuberculosis	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
32. Pott's disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
37. Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	2	1	2
39. Cancer and other malignant tumours of the buccal cavity	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...	...	...	1	1	1	1	3	1
40. Cancer and other malignant tumours of the stomach, liver	...	...	...	...	...	...	...	...	...	...	2	...	...	...	4	2	...	1	...	...	...	...	6	3	...	...	2	...	2	...	8	3
42. Cancer and other malignant tumours of the female genital organs... ...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	1	...	3
44. Cancer and other malignant tumours of the skin	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	2	...
45. Cancer and other malignant tumours of other organs or of organs not specified	...	...	...	...	...	...	...	...	...	...	...	...	2	1	1	1	1	...	1	...	...	...	5	2	...	...	...	1	...	1	5	3
47. Acute articular rheumatism	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
48. Chronic rheumatism and gout ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
49. Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	13	...	13	...	13	...
50. Diabetes	...	...	...	...	...	...	...	...	1	1	...	...	...	1	1	1	...	...	...	...	...	...	2	3	...	...	...	...	...	...	2	3
53. Leuchæmia	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
55. Other general diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
55a. Trypanosomiasis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
56. Alcoholism (acute or chronic) ...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	3	1
Carried forward	5	5	7	...	5	3	9	4	8	6	17	7	14	9	17	6	3	3	3	...	...	...	88	43	5	2	215	11	220	13	308	56

Name of disease.	EUROPEANS																						NATIVES						Grand totals	
	0—1		1—5		5—15		15—25		25—35		35—45		45—55		55—65		65—75		75—85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	5	5	7	...	5	3	9	4	8	6	17	7	14	9	17	6	3	3	3	...	...	...	88	43	5	2	215	11	220	13	308	56
II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																																
60. Encephalitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
61. Simple meningitis	1	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	...	1	20	1	20	2	22	4
61a. Cerebro-spinal fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
63. Other diseases of the spinal cord ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
64. Cerebral hæmorrhage, apoplexy ...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1	...	...	...	...	...	3	2	...	...	7	...	7	...	10	2
66. Paralysis without specified cause ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
68. Other forms of mental alienation ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	...	9	...	9	..
69. Epilepsy	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	6	1	6	1	8	1
71. Convulsions of infants	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	2
74. Other diseases of the nervous system ...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	3	...	...	...	...	...	...	...	3	...
III. DISEASES OF THE CIRCULATORY SYSTEM.																																
77. Pericarditis	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	1
78. Acute endocarditis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
79. Organic diseases of the heart ...	...	...	...	...	...	...	...	...	1	...	...	1	1	...	2	...	...	1	...	...	...	...	4	2	...	...	7	1	7	1	11	3
80. Angina pectoris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
81. Diseases of the arteries, atheroma, aneurysm, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
82. Embolism and thrombosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
85. Hæmorrhage; other diseases of the circulatory system	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
IV. DISEASES OF THE RESPIRATORY SYSTEM.																																
87. Diseases of the larynx	...	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	3
89. Acute bronchitis...	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	...	2	4	...	2	2	1	2	3	4	7
90. Chronic bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	...	1	...	...	2	3	...	...	1	...	1	...	3	3
91. Broncho-pneumonia	4	...	1	2	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	3	4	1	1	...	5	1	11	4
92. Pneumonia	2	1	4	1	1	2	...	...	1	1	6	1	2	1	1	...	1	1	1	...	...	...	19	8	5	...	79	2	84	2	103	10
93. Pleurisy	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	1
95. Gangrene of the lung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
96. Asthma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
98. Other diseases of the respiratory system (tuberculosis excepted)	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
98a. Miners' phthisis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
V. DISEASES OF THE DIGESTIVE SYSTEM.																																
103. Other diseases of the stomach (cancer excepted)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	...
Carried forward	15	13	13	5	7	7	10	5	12	7	25	9	20	12	24	8	8	7	4	1	2	...	140	74	14	6	358	17	372	23	512	97

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0—1		1—5		5—15		15—25		25—35		35—45		45—55		55—65		65—75		75—85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	15	13	13	5	7	7	10	5	12	7	25	9	20	12	24	8	8	7	4	1	2	...	140	74	14	6	358	17	372	23	512	97
104. Diarrhœa and enteritis (under two years)	4.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	2	...	...	...	2	...	6	...
105. Diarrhœa and enteritis (two years and over)	...	...	1	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	3	...	...	5	...	5	...	6	3
108. Appendicitis and typhilitis ...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	2
109. Hernia, intestinal obstruction ...	...	...	...	...	...	...	...	...	...	...	2	...	1	...	1	...	...	1	...	...	...	...	4	1	...	...	2	...	2	...	6	1
113. Cirrhosis of the liver	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2	...	...	...	6	...	6	...	8	...
114. Biliary calculi	...	...	...	...	...	...	...	...	...	...	...	3	...	...	1	...	...	...	...	...	...	...	1	3	...	...	...	...	...	...	1	3
115. Other diseases of the liver	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...	3	...	3	...	5	..
116. Diseases of the spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
117. Simple peritonitis (non-puerperal) ...	...	...	...	...	...	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	3	1	...	...	5	1	5	1	8	2
VI. Non-Venereal Diseases of the Genito-Urinary System and Annexa.																																
119. Acute nephritis	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	3	...	...	...	4	...	4	...	7	...
120. Bright's disease...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4	...
122. Other diseases of the kidneys and annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
124. Diseases of the bladder	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
124a. Bilharziosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
125. Diseases of the urethra, urinary abscess, etc.	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
129. Uterine tumour (non-cancerous) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
131. Cysts and other tumours of the ovary ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
132. Salpingitis and other diseases of the female genital organs	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
VII. The Puerperal State.																																
134. Accidents of pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	....	2	...	2	...	2
135. Puerperal hæmorrhage	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
136. Other accidents of labour	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
137. Puerperal septicæmia	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4
138. Puerperal albuminuria and convulsions	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
140. Following childbirth (not otherwise defined)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
VIII. Diseases of the Skin and of the Cellular Tissue.																																
142. Gangrene	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2	...	3	...
144. Acute abscess	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	4	...
145. Other diseases of the skin and annexa...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
Carried forward	19	14	15	6	7	8	12	6	13	11	30	14	26	15	30	9	8	8	4	1	2	...	166	92	16	6	397	25	413	31	579	123

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0—1		1—5		5—15		15—25		25—35		35—45		45—55		55—65		65—75		75—85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	19	14	15	6	7	8	12	6	13	11	30	14	26	15	30	9	8	8	4	1	2	...	166	92	16	6	397	25	413	31	579	123
IX. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.																																
146. Diseases of the bones (tuberculosis excepted)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
X. MALFORMATIONS.																																
150. Congenital malformations (stillbirths not included)	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
XI. EARLY INFANCY.																																
151. Congenital debility, icterus and sclerema	7	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7	9	4	...	...	...	4	...	11	9
152. Other causes peculiar to early infancy...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
XII. OLD AGE.																																
154. Senility	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	3	...	...	2	4	...	...	2	...	2	...	4	4
XIII. EXTERNAL CAUSES.																																
155. Suicide by poison	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	1	...	...	1	...	1	...	2	1
159. Suicide by firearms	...	...	...	...	...	...	...	...	1	1	...	...	1	...	1	...	...	...	...	...	...	...	3	1	...	...	...	...	...	...	3	1
163. Other suicides	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
165. Other acute poisonings	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2	...	3	...
167. Burns (conflagration excepted) ...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	8	1	9	1	10	1
169. Accidental drowning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
170. Traumatism by firearms	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
171. Traumatism by cutting or piercing instruments	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
172. Traumatism by fall	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
173. Traumatism in mines and quarries ...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4	...
175. Traumatism by other crushing (vehicles, railways, landslides, etc.) ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1
176. Injuries by animals	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	1	...	...	...	1	...	1	...	2	...
185. Fractures (cause not specified) ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	..	...	...	...	...	...	...	...	1	...	...	...	6	...	6	...	7	...
186a. Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
XIV. ILL-DEFINED DISEASES.																																
187. Ill-defined organic diseases ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
189. Cause of death not specified or ill-defined	2	4	...	...	...	...	...	...	...	...	1	...	1	2	2	3	...	...	...	1	...	...	6	10	1	1	8	...	9	1	15	11
Totals	29	28	16	6	8	8	12	7	18	12	34	14	31	18	36	13	9	9	5	5	2	...	200	120	22	7	433	26	455	33	655	153

TABLE 5.

CLASSIFICATION OF DEATHS—EUROPEANS, 1921.

Deaths classified according to the international classification of causes of sickness and death.

Classification No.	Disease.	No. of Deaths, 1921.
1	Typhoid fever	2
4	Malaria	24
4a	Blackwater fever	23
9	Diphtheria and croup	3
10	Influenza	27
14	Dysentery	2
18	Erysipelas	2
20	Purulent infection and septicæmia	2
24	Tetanus	1
28	Tuberculosis of the lungs	10
31	Abdominal tuberculosis	1
39	Cancer and other malignant tumours of the buccal cavity	2
40	Cancer and other malignant tumours of the stomach, liver	9
42	Cancer and other malignant tumours of the female genital organs	2
44	Cancer and other malignant tumours of the skin	2
45	Cancer and other malignant tumours of other organs or of organs not specified	7
47	Acute articular rheumatism	1
48	Chronic rheumatism and gout	1
50	Diabetes	5
53	Leuchæmia	1
56	Alcoholism (acute or chronic)	4
61	Simple meningitis	4
64	Cerebral hæmorrhage, apoplexy	5
66	Paralysis without specified cause	1
69	Epilepsy	2
71	Convulsions of infants	3
74	Other diseases of the nervous system	3
77	Pericarditis	1
78	Acute endocarditis	1
79	Organic diseases of the heart	6
80	Angina pectoris	1
81	Diseases of the arteries, atheroma, aneurysm, etc.	1
87	Diseases of the larynx	3
89	Acute bronchitis	6
90	Chronic bronchitis	5
91	Broncho-pneumonia	9
92	Pneumonia	27
93	Pleurisy	2
98	Other diseases of the respiratory system (tuberculosis excepted)	1
98a	Miners' phthisis	1
103	Other diseases of the stomach (cancer excepted)	1
104	Diarrhœa and enteritis (under two years)	4
105	Diarrhœa and enteritis (two years and over)	4
108	Appendicitis and typhilitis	3
109	Hernia, intestinal obstruction	5
113	Cirrhosis of the liver	2
114	Biliary calculi	4
115	Other diseases of the liver	2
117	Simple peritonitis (non-puerperal)	4
119	Acute nephritis	3
120	Bright's disease	2
124	Diseases of the bladder	1
125	Diseases of the urethra, urinary abscess, etc.	1
129	Uterine tumour (non-cancerous)	1
132	Salpingitis and other diseases of the female genital organs	2
135	Puerperal hæmorrhage	1
136	Other accidents of labour	1
137	Puerperal septicæmia	2
138	Puerperal albuminuria and convulsions	1
142	Gangrene	1
150	Congenital malformations (still-births not included)	1
151	Congenital debility, icterus and sclerema	16
152	Other causes peculiar to early infancy	1
154	Senility	6
155	Suicide by poison	2
159	Suicide by firearms	4
163	Other suicides	2
165	Other acute poisonings	1
167	Burns (conflagration excepted)	1
169	Accidental drowning	1
170	Traumatism by firearms	1
171	Traumatism by cutting or piercing instruments	1
172	Traumatism by fall	1
173	Traumatism in mines and quarries	2
175	Traumatism by other crushing (vehicles, railways, landslides, etc.)	3
176	Injuries by animals	1
185	Fractures (cause not specified)	1
187	Ill-defined organic disease	1
189	Cause of death not specified or ill-defined	16
	Total	320

TABLE 6.

CLASSIFICATION OF DEATHS—NATIVES, 1921.

Deaths classified according to the international classification of causes of sickness and death.

Classification No.	Disease.	No. of Deaths, 1921.
1	Typhoid fever	2
4	Malaria	12
4a	Blackwater fever	1
8	Whooping cough	1
10	Influenza	73
14	Dysentery	8
20	Purulent infection and septicæmia	12
24	Tetanus	4
26	Pellagra	1
27	Beri-beri	1
28	Tuberculosis of the lungs	86
29	Acute miliary tuberculosis	2
30	Tuberculous meningitis	1
32	Pott's disease	3
37	Syphilis	3
39	Cancer and other malignant tumours of the buccal cavity	2
40	Cancer and other malignant tumours of the stomach, liver	2
42	Cancer and other malignant tumours of the female genital organs	1
45	Cancer and other malignant tumours of other organs, or of organs not specified	1
48	Chronic rheumatism and gout	1
49	Scurvy	13
55	Other general diseases	1
55a	Trypanosomiasis	2
60	Encephalitis	1
61	Simple meningitis	22
61a	Cerebro-spinal fever	1
63	Other diseases of the spinal cord	1
64	Cerebral hæmorrhage, apoplexy	7
68	Other forms of mental alienation	9
69	Epilepsy	7
77	Pericarditis	1
79	Organic diseases of the heart	8
82	Embolism and thrombosis	3
85	Hæmorrhage; other diseases of the circulatory system	1
89	Acute bronchitis	5
90	Chronic bronchitis	1
91	Broncho-pneumonia	6
92	Pneumonia	86
95	Gangrene of the lung	2
96	Asthma	1
104	Diarrhœa and enteritis (under two years)	2
105	Diarrhœa and enteritis (two years and over)	5
109	Hernia, intestinal obstruction	2
113	Cirrhosis of the liver	6
115	Other diseases of the liver	3
116	Diseases of the spleen	2
117	Simple peritonitis (non-puerperal)	6
119	Acute nephritis	4
120	Bright's disease	2
122	Other diseases of the kidneys and annexa	1
124	Diseases of the bladder	1
124a	Bilharziosis	1
131	Cysts and other tumours of the ovary	1
134	Accidents of pregnancy	2
136	Other accidents of labour	1
137	Puerperal septicæmia	2
140	Following childbirth (not otherwise defined)	1
142	Gangrene	2
144	Acute abscess	4
145	Other diseases of the skin and annexa	1
146	Diseases of the bones (tuberculosis excepted)	1
151	Congenital debility, icterus and sclerema	4
154	Senility	2
155	Suicide by poison	1
165	Other acute poisonings	2
167	Burns (conflagration excepted)	10
170	Traumatism by firearms	1
173	Traumatism in mines and quarries	2
176	Injuries by animals	1
185	Fractures (cause not specified)	6
186a	Execution	3
187	Ill-defined organic disease	1
189	Cause of death not specified or ill-defined	10
	Total	488

TABLE 7.

The following table is a comparative statement of mortality amongst natives employed on mines in Southern Rhodesia for the twelve months January to December, 1921, with the rates for the last thirteen years for comparison :—

Comparative Statement of Mortality amongst Natives Employed on Mines in Southern Rhodesia, January to December, 1921.

Month.	Average No. of natives employed.	No. of deaths from disease.	Death rate per 1,000 per mensem from disease.	No. of deaths from accident.	Death rate per 1,000 per mensem from accident.	Total No. of deaths.	Death rate per 1,000 per mensem from all causes.
January ...	39,464	51	1.29	13	.33	64	1.62
February ...	40,005	67	1.67	2	.05	69	1.72
March ...	38,752	51	1.32	8	.21	59	1.52
April ...	39,465	40	1.01	6	.15	46	1.17
May ...	39,440	33	.84	7	.18	40	1.01
June ...	39,583	23	.58	8	.20	31	.78
July ...	38,799	49	1.26	2	.05	51	1.31
August ...	36,083	102	2.83	6	.17	108	2.99
September	35,968	94	2.61	14	.39	108	3.00
October ...	35,438	58	1.64	10	.28	68	1.92
November...	34,141	59	1.73	6	.18	65	1.90
December ...	34,124	62	1.82	12	.35	74	2.17

Totals and Averages.

Year.			Per annum.		Per annum.		Per annum.
1921 ...	37,605	689	18.32	94	2.50	783	20.82
1920 ...	37,669	599	15.90	75	1.99	674	17.90
1919 ...	30,296	507	16.73	90	2.97	597	19.71
1918 ...	32,766	3,629	110.76	88	2.69	3,717	113.44
1917 ...	38,861	700	18.01	149	3.83	849	21.85
1916 ...	40,420	911	22.48	172	4.24	1,083	26.73
1915 ...	37,928	832	21.94	159	4.19	991	26.13
1914 ...	36,100	897	24.85	135	3.74	1,032	28.59
1913 ...	33.543	783	23.49	158	4.71	946	28.20
1912 ...	34,494	1,073	31.11	163	4.73	1,236	35.83
1911 ...	37,909	1,085	28.62	164	4.33	1.249	32.95
1910 ...	37,826	1,682	44.74	182	4.81	1.864	49.28
1909 ...	32,721	1,383	42.27	161	4.92	1,544	47.19
1908 ...	30,865	1,397	45.26	132	4.28	1,529	49.54

TABLE 8.

Table showing Infectious Diseases reported to Public Health Department during 1921.

Diseases.	District.	Number of cases.		Number of deaths.	
		European.	Native.	European.	Native.
Smallpox	Gutu	...	26	...	8
	Selukwe	...	18	...	3
	Umvuma	...	6	...	1
	Buhera	...	8	...	...
	Belingwe	...	4	...	...
	Insiza	...	16	...	7
	Gwelo	...	1	...	...
	Enkeldoorn	...	35	...	1
	Gwanda	...	5	...	...
	Melsetter	...	43	...	3
	Bikita	...	99	...	33
	Chipinga	...	182	...	45
	Ndanga	1	8	...	34
	Victoria	...	30	...	1
	Mtoko	...	10	...	2
	Chilimanzi	...	20	...	7
	Gatooma	...	1	...	...
	Chibi	...	Unknown.	...	...
	Shamva	...	1	...	...
	Tafuna	...	1	...	...
Influenza	Umvuma	...	8	...	1
	Gwelo	47	Several.	...	...
	Marandellas	6	94	1	11
	Rusape	9	...	1	...
	Que Que	4	Several.	...	...
	Salisbury	70	144	2	14
	Gatooma	...	180	...	...
	Bulawayo	92	62	4	14
	Inyati	2	75	...	4
	Bindura	20	3	1	...
	Filabusi	Prevalent.		...	...
	Wankie	Prevalent.		...	...
	Shabani	4	136	1	13
	Arcturus	9	60	...	...
	Mazoe	Several cases.		...	...
	Sinoia	1	20	...	...
	Shamva	2	36	...	...
	Inyanga	...	2	...	2
Influenzal pneumonia	Victoria	Unknown.		...	6
Typhoid fever	Shabani	1	...	...	...
Enteric	Gwelo	1	...	...	...
	Marandellas	1	...	...	...
	Melsetter	1	...	...	...
	Mazoe	1	...	...	...
Mumps	Salisbury High School	3	...	...	...
Scarlet fever	Victoria	1	...	...	...
	Sinoia	3	1	...	...
Whooping cough	Filabusi	5	...	...	...
	Marandellas	1	...	...	...
Chickenpox	Gwelo	1	8	...	...
	Wankie	...	1	...	...
	Melsetter	7	...	...	...
	Inyati	...	5	...	...
	Bindura	...	1	...	...
Measles	Marandellas	7	...	...	...
	Rusape	2	...	...	...
	Shamva	3	...	...	...
	Sinoia	7	...	...	...
	Salisbury	3	...	...	...
	Mazoe	1	...	...	...
	Bindura	1	...	...	...
	Victoria	6	...	...	...
	Gwelo	1	...	...	...
	Melsetter	5	4	...	...
Diphtheria	Darwin	4	...	1	...
	Inyati	1	...	...	...
	Bindura	1	...	...	...
	Victoria	2	...	...	...
Syphilis	Bulawayo	...	1	...	1
Trypanosomiasis	Salisbury	...	1	...	1
	Sinoia	...	1	...	1

Total number of vaccinations performed during the year 1921 : 168,003.

TABLE 9.

Cases, with mortality rate per cent., admitted to hospitals during 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	1,121	37	3.30	1,009	37	3.66
	Native	818	69	8.44	846	111	13.12
Umtali ...	White	356	13	3.65	409	13	3.18
	Native	123	17	13.01	183	18	9.83
Gwelo ...	White	177	11	6.21	208	6	2.88
	Native	325	37	11.38	424	48	11.32
Victoria ...	White	83	6	7.23	109	4	3.67
	Native	91	6	6.59	123	13	10.56
Gwanda ...	White	24	1	4.17	19	...	...
	Native	188	12	6.38	131	16	12.21
Enkeldoorn ...	White	15	...	...	34	1	2.94
	Native	29	...	...	36	1	2.77
Gatooma ...	White	223	4	1.79	195	6	3.07
	Native	334	57	17.07	356	64	17.97
Bulawayo ...	White	872	49	5.62	1,034	35	3.38
	Native	897	100	11.15	904	120	13.27
Shamva ...	White	150	5	3.33	151	3	1.98
	Native	...	...	...	...	...	...
Sinoia ...	White	90	1	1.11	94	2	2.12
	Native	101	10	9.90	129	13	10.08
Belingwe ...	White	12	1	8.33	11	1	9.09
	Native	43	4	9.30	64	2	3.12
Totals ...	White	3,123	182	4.10	3,273	108	3.30
	Native	2,949	312	10.58	3,196	406	12.70

TABLE 10.

Cases, with mortality rate per cent., of malarial fever admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	209	3	1.44	229	...	...
	Native	55	1	1.82	91	3	3.29
Umtali ...	White	193	...	...	209	...	...
	Native	5	1	20.00	15	...	...
Gwelo ...	White	39	1	2.56	30	...	...
	Native	69	...	...	39	4	10.25
Victoria ...	White	28	...	...	28	...	...
	Native	...	...	...	8	2	25.00
Gwanda ...	White	7	...	...	4	...	...
	Native	22	..	...	13	...	...
Enkeldoorn ...	White	6	...	...	12	...	...
	Native	...	...	...	6	...	...
Gatooma ...	White	86	...	...	71	1	1.40
	Native	21	1	4.76	19	...	...
Bulawayo ...	White	90	1	1.11	88	...	...
	Native	42	...	...	35	1	2.85
Shamva ...	White	93	2	2.15	102	1	.98
	Native	...	...	...	...	...	...
Sinoia ...	White	44	...	...	46	...	...
	Native	24	...	...	13	...	...
Belingwe ...	White	3	...	...	2	...	...
	Native	1	1	100.00	...	...	...
Totals ...	White	798	7	.88	821	2	.24
	Native	239	4	1.67	239	10	4.18

TABLE 11.

Cases, with mortality rate per cent., of hæmoglobinuric fever (blackwater) admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	24	2	8.33	18	3	16.66
	Native	2	...	...	...	...	...
Umtali ...	White	12	4	33.33	5	...	...
	Native	1	...	...	...	...	...
Gwelo ...	White	...	...	...	1	...	...
	Native	...	...	...	...	...	...
Victoria ...	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Gwanda ...	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Enkeldoorn ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	10	2	20.00	7	1	14.28
	Native	...	...	...	...	...	...
Bulawayo ...	White	5	1	20.00	2	...	...
	Native	2	...	...	...	...	...
Shamva ...	White	13	1	7.69	13	...	...
	Native	...	...	...	...	...	...
Sinoia ...	White	3	...	...	6	1	16.66
	Native	...	...	...	...	...	...
Belingwe ...	White	1	...	...	1	1	100.00
	Native	...	...	...	...	...	...
Totals ...	White	70	10	14.29	53	6	11.32
	Native	5	...	...	...	...	...

TABLE 12.

Cases, with mortality rate per cent., of dysentery admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	23	...	...	11	...	...
	Native	14	1	7.14	40	1	2.50
Umtali ...	White	3	...	...	2	...	...
	Native	1	...	...	2	1	50.00
Gwelo ...	White	2	...	...	6	...	...
	Native	...	...	...	4	1	25.00
Victoria ...	White	4	...	...	1	...	...
	Native	1	1	100.00	...	...	...
Gwanda ...	White	1	...	...	...	...	...
	Native	1	...	...	3	1	33.33
Enkeldoorn ...	White	2	...	...	...	...	...
	Native	...	...	...	2	...	...
Gatooma ...	White	2	...	...	...	...	...
	Native	...	...	...	2	...	...
Bulawayo ...	White	13	...	...	13	...	...
	Native	7	1	14.29	6	2	33.33
Shamva ...	White	4	...	...	1	...	...
	Native	...	...	...	...	...	...
Sinoia ...	White	4	...	...	1	...	...
	Native	1	1	100.00	1	1	100.00
Belingwe ...	White	...	...	...	...	...	...
	Native	1	...	...	1	...	...
Totals ...	White	58	...	...	35	...	...
	Native	26	4	15.38	61	7	11.47

TABLE 13.

Cases, with mortality rate per cent., of pneumonia admitted to hospitals during 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per eent.
Salisbury ...	White	15	4	26.66	27	5	18.51
	Native	71	26	36.62	103	20	19.41
Umtali ...	White	4	...	...	8	1	12.50
	Native	11	5	45.45	8	3	37.50
Gwelo ...	White	16	3	18.75	7	1	14.48
	Native	32	8	25.00	53	20	37.73
Victoria ...	White	4	1	25.00	2	1	50.00
	Native	6	...	...	4	1	25.00
Gwanda ...	White	1	...	...	...	...	...
	Native	6	1	16.67	8	5	62.50
Enkeldoorn ...	White	3	...	...	1	1	100.00
	Native	...	...	...	1	...	...
Gatooma ...	White	10	...	...	13	3	23.07
	Native	44	11	25.00	40	13	32.50
Bulawayo ...	White	13	3	23.08	9	1	11.11
	Native	48	20	41.67	55	17	30.91
Shamva ...	White	3	1	33.33	...	...	...
	Native	...	...	...	...	...	...
Sinoia ...	White	4	...	...	3	1	33.33
	Native	5	2	40.00	10	1	10.00
Belingwe ...	White	...	...	...	...	...	...
	Native	6	3	50.00	5	1	20.00
Totals ...	White	73	12	16.44	70	14	20.00
	Native	229	76	33.19	287	81	28.22

TABLE 14.

Cases, with mortality rate per cent., of typhoid fever admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per eent.
Salisbury ...	White	20	3	15.00	14	1	7.14
	Native	3	1	33.33	...	...	...
Umtali ...	White	2	...	...	4	...	...
	Native	...	...	...	...	...	...
Gwelo ...	White	13	2	15.38	7	...	...
	Native	1	...	...	...	...	...
Victoria ...	White	5	2	40.00	2	...	...
	Native	...	...	...	...	...	...
Gwanda ...	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Enkeldoorn ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Bulawayo ...	White	25	4	16.00	19	1	5.26
	Native	2	1	50.00	6	2	33.33
Shamva ...	White	1	...	...	1	...	...
	Native	...	...	...	...	...	...
Sinoia ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Belingwe ...	White	1	1	100.00	...	...	...
	Native	...	...	...	...	...	...
Totals ...	White	68	12	17.65	47	2	4.25
	Native	6	2	33.33	6	2	33.33

TABLE 15.

Cases, with mortality rate per cent., of scurvy admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	...	...	...	...	...	...
	Native	2	...	...	4	...	...
Umtali ...	White	...	...	...	...	...	...
	Native	...	...	...	18	1	5.55
Gwelo ...	White	...	...	...	...	...	...
	Native	10	1	10.00	12	1	8.33
Victoria ...	White	...	...	...	...	...	...
	Native	...	...	...	1	...	...
Gwanda ...	White	...	...	...	...	...	...
	Native	10	2	20.00	5	1	20.00
Enkeldoorn ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	...	...	...	...	...	...
	Native	28	2	7.14	41	1	2.44
Bulawayo ...	White	...	...	...	...	...	...
	Native	39	9	23.08	50	12	24.00
Shamva ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Sinoia ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	2	...	...
Totals ...	White	...	...	...	...	...	...
	Native	89	14	15.73	133	16	12.03

TABLE 16.

Cases, with mortality rate per cent., of Spanish influenza admitted to hospitals in 1921, as compared with 1920.

Name of hospital.		1920.			1921.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	10	...	...	...	...	...
	Native	100	3	3.00	114	23	20.17
Umtali ...	White	...	...	...	...	...	...
	Native	3	2	...	...	...	...
Gwelo ...	White	4	...	...	21	...	...
	Native	1	1	100.00	54	2	3.70
Victoria ...	White	...	...	...	...	...	...
	Native	...	...	...	3	...	...
Gwanda ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Enkeldoorn ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	...	...	...	...	...	...
	Native	2	...	...	...	...	...
Bulawayo ...	White	30	...	...	64	1	1.56
	Native	73	5	6.85	165	28	16.96
Shamva ...	White	3	...	...	8	1	12.50
	Native	...	...	...	...	...	...
Sinoia ...	White	...	...	...	...	...	...
	Native	...	...	...	4	...	...
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals ...	White	47	...	...	93	2	2.15
	Native	179	11	6.15	340	53	15.59

Table 17.

EARNINGS FROM PAYING PATIENTS.

Hospitals.	1920.			1921.		
	£	s.	d.	£	s.	d.
Salisbury	7,882	12	1	8,473	2	9
Umtali	1,641	13	3	1,820	8	6
Gwelo	1,104	6	9	1,486	16	7
Victoria	428	6	5	461	15	11
Gwanda	253	19	2	250	9	6
Enkeldoorn	52	0	0	202	0	0
Gatooma	1,916	0	1	1,856	8	9
Shamva	505	17	10	585	4	3
Sinoia	368	5	5	443	6	0
Belingwe	234	14	9	199	18	0
Total	14,387	15	9	15,779	10	3

Table 18.

Table showing the number of beds in each Government hospital and Ingutsheni Asylum, the daily average of patients treated, and the revenue and expenditure of each.

Name of hospital.	Number of beds.		Daily average of patients treated.		Gross expenditure.			Revenue.			Net expenditure.		
	White.	Native.	White.	Native.	£	s.	d.	£	s.	d.	£	s.	d.
Salisbury ...	56	45	51	55	18,691	10	0	7,284	17	3	11,406	12	9
Umtali	30	16	10·3	10·3	4,015	4	5	1,702	4	0	2,313	0	5
Gwelo	28	34	7	33	4,460	18	11	1,269	16	9	3,191	2	2
Victoria	12	12	2·83	8·75	1,821	13	5	421	15	2	1,399	18	3
Gwanda	9	22	0·36	6·56	919	12	5	245	2	2	674	10	3
Enkeldoorn ...	4	4	0·98	1·56	624	0	0	77	0	0	547	0	0
Gatooma	16	60	8·5	49·06	4,074	3	10	1,631	18	10	2,442	5	0
Shamva	13	...	3·9	...	1,797	1	3	613	3	3	1,183	18	0
Sinoia	8	6	2·3	6·46	1,239	13	3	420	7	0	819	6	3
Belingwe... ...	9	13	0·28	2·5	537	5	5	193	12	10	343	12	7
Ingutsheni Asylum	36	~~114~~ 144	29	138	6,026	14	1	1,179	14	0	4,847	0	1

TABLE 19.

Return of Government and pauper patients treated in Government hospitals during 1921.

Name of hospital.	Number of free patients.	Total number of units treated.	Cost to hospital votes of treatment, maintenance, etc., worked out on gross expenditure basis.	Loss of revenue represented.
			£ s. d.	£ s. d.
Salisbury	472	16,464	7,958 0 0	2,660 0 0
Umtali	111	2,427	707 17 6	376 2 6
Gwelo	246	7,959	1,717 14 9	1,110 9 0
Victoria	115	2,801	567 4 1	394 18 4
Gwanda	54	1,283	235 4 3	169 7 6
Enkeldoorn ...	61	644	164 7 1	94 1 6
Gatooma	288	13,467	2,743 11 7	1,730 7 6
Shamva	20	132	38 4 6	5 4 6
Sinoia	66	1,385	115 13 4	299 10 0
Belingwe	31	834	17 7 0	107 12 6
Totals ...	1,464	47,396	14,265 4 1	6,947 13 4

TABLE 20.

Table giving average cost per head at the several Government hospitals and Ingutsheni Asylum.

Name of hospital.	In-patients.		Days treated—patients.	Days maintained—staff.	Total days maintained—staff and patients.	Cost per caput per diem worked out on gross expenditure.	Deficit of revenue over expenditure.	Approximate charge on public funds for each patient treated.
	European.	Native.						
						s. d.	£ s. d.	£ s. d.
Salisbury ...	1,165	900	38,568	32,090	70,658	5 5	11,406 12 9	5 10 5
Umtali	420	186	7,557	6,042	13,599	5 10	2,313 0 5	3 1 6
Gwelo	208	424	14,469	6,729	21,198	4 3	3,191 2 2	5 1 4
Victoria	109	123	4,229	4,677	8,906	4 1	1,399 18 3	6 0 8
Gwanda	19	136	2,526	2,477	5,003	3 8	674 10 3	4 7 0
Enkeldoorn ...	36	37	926	1,495	2,421	5 1	574 0 0	7 17 3
Gatooma	198	414	20,025	6,700	26,725	4 1	2,442 5 0	4 19 8
Sinoia	93	122	3,198	2,992	6,190	3·10 ~~1 8~~	1,183 18 0	5 10 1
Shamva	153	...	1,439	4,745	6,184	5 9	819 6 3	5 7 1
Belingwe	9	37	1,165	1,095	2,260	4 9	343 12 7	7 9 5
Ingutsheni Asylum	37	183	61,011	8,360	69,371	2 3	4,847 0 1	22 0 7

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